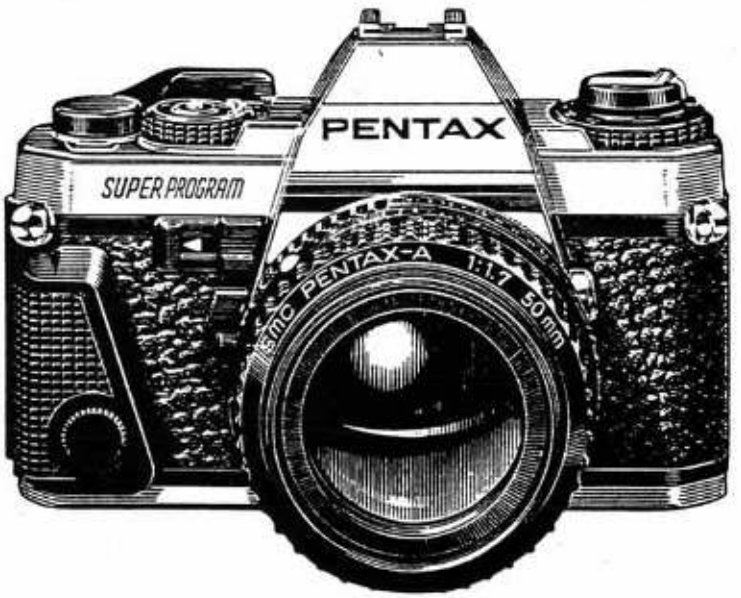
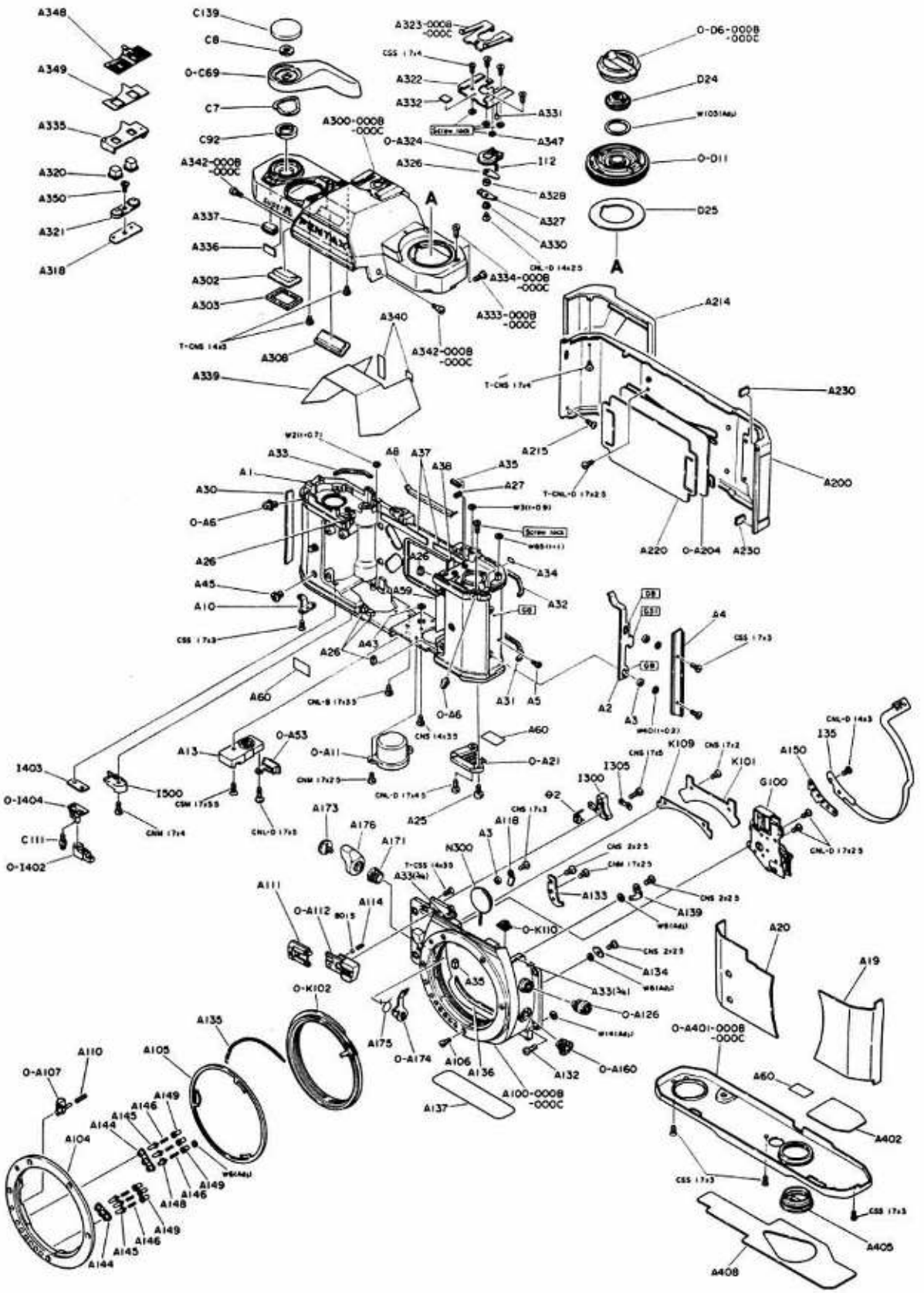
PRODUCT No.24500

PENTAX

SUPER PROGRAM



EXPLODED ILLUSTRATION



Product No.24500

PENTAX *super A1*

Fig. 1

EXPLODED ILLUSTRATION

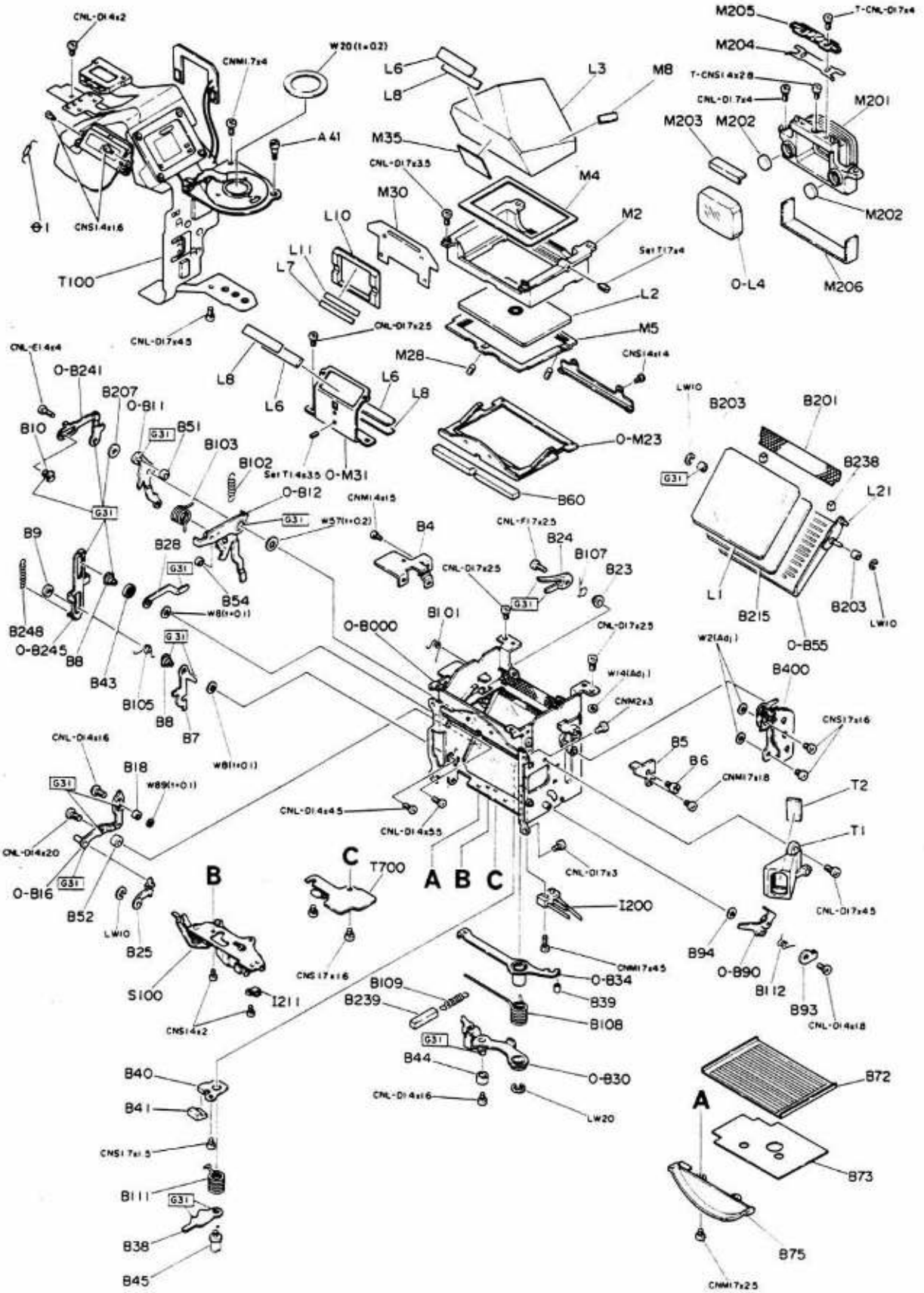
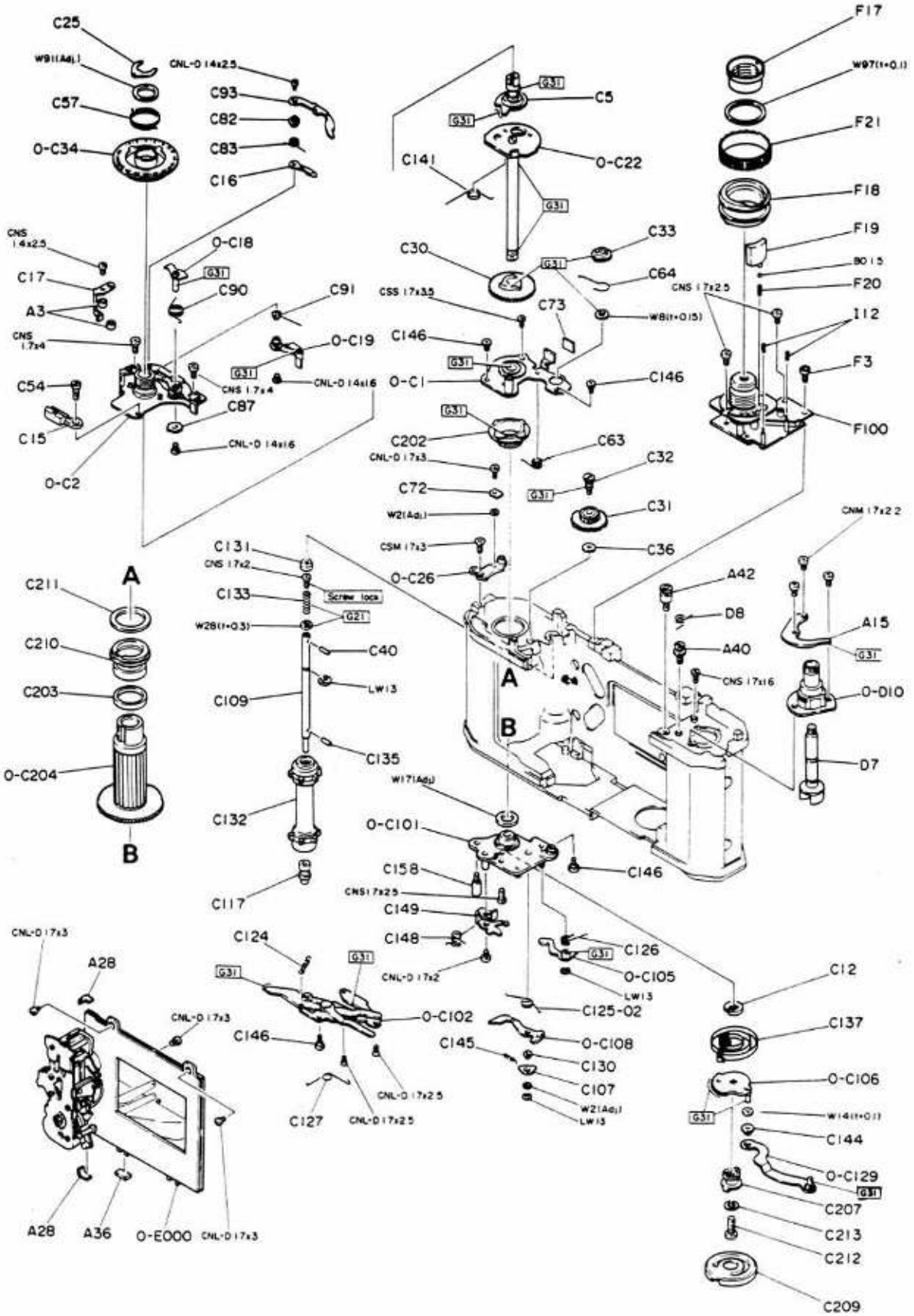


Fig. 2

EXPLODED ILLUSTRATION

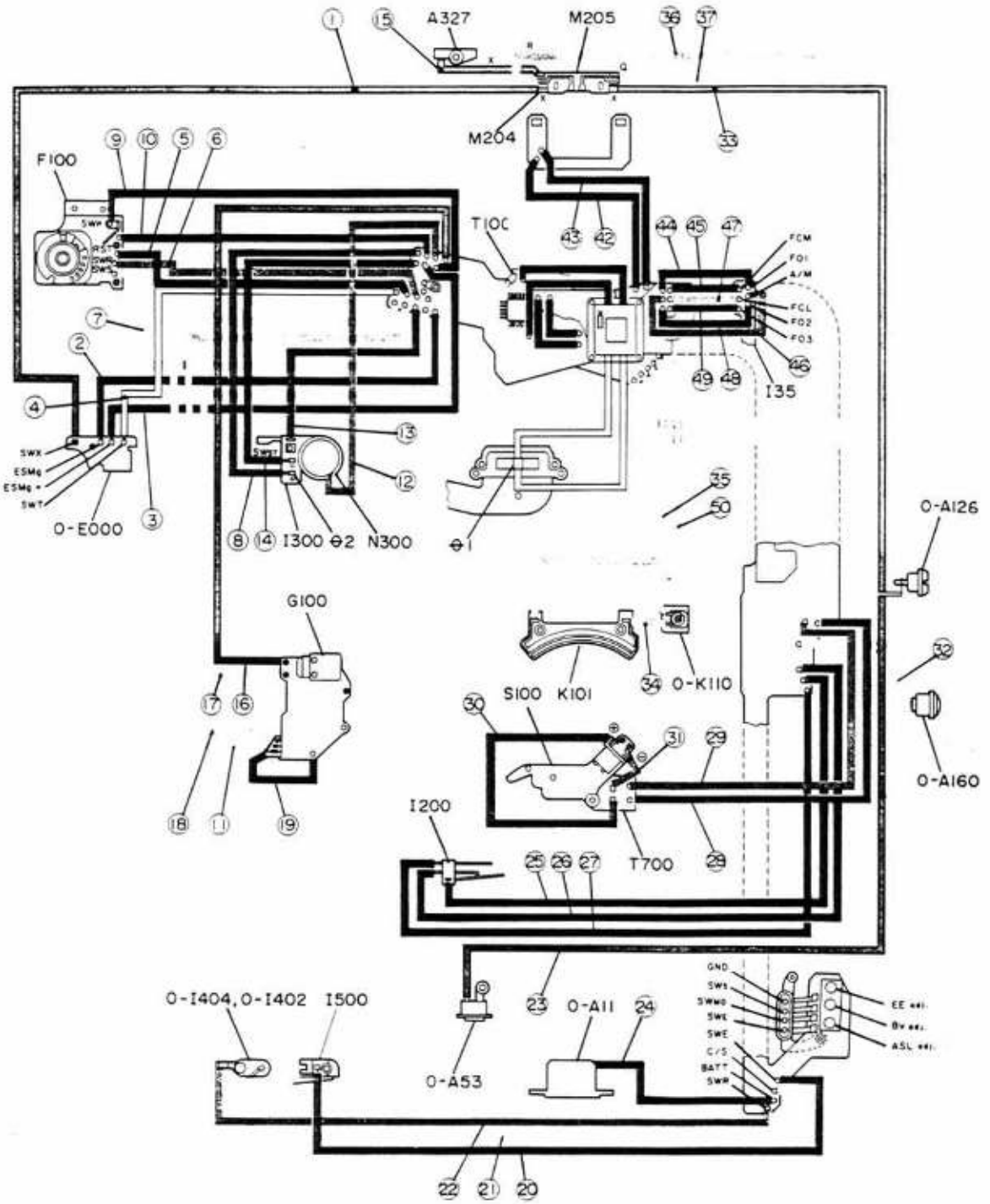


Product No.24500

PENTAX *super A1*

Fig. 3

DISTRIBUTING WIRES



Product No.24500

PENTAX *super A1*

Fig. 45

LIST OF SERVICE PARTS

Product No.24500

PENTAX *super*A1

Note: 1. The parts with numbers starting '0-' are assemblies.

2. Only available parts are listed below.

Parts No.	Description	Quantity	Interchangeability
A2	Back cover key	1	23903-A2
A3	Back cover key collar	5	23903-A3
A4	Back cover key retainer plate	1	23903-A4
A5	Back cover guide screw	1	23903-A5
0-A6	Strap hook assy. (A6, A18)	2	23903-0-A6
A8	Shutter light seal cover	1	23903-A8
A10	Back cover shaft receptacle	1	24300-A10
0-A11	Battery case assy. (A11, A12)	1	
A13	Tripod seat	1	
A15	Back cover key retainer spring	1	23903-A15
A19	Body covering, left	1	
A20	Body covering, right	1	
0-A21	Connector assy, (A21, A57)	1	
A25	Connector retainer screw	1	
A26	Light seal D	5	23903-A26
A27	Light seal E	1	23903-A27

Parts No.	Description	Quantity	Interchangeability
A28	Light seal F	2	23903-A28
A30	Light seal	1	23903-A30
A31	Light seal A	1	23903-A31
A32	Light seal B	1	23903-A32
A33	Light seal C	1	23903-A33
A34	Light seal tape	1	23903-A34
A35	Light seal H	3	23903-A35
A36	Light seal I	1	23903-A36
A37	Light seal	2	23903-A37
A38	Light seal J	1	23903-A38
A40	Installing screw A	1	
A41	Installing screw B	1	
A42	Installing screw C	1	
A43	Spacer B	1	
A45	Grip mount socket	1	
0-A53	Non-cord terminal assy. (A53, A54)	1	
A59	Insulation tape	1	
A60	Insulation tape	3	23906-A60
A100-000C -000B	Front board assy. (A101, A102, A104～A114, 0-A126, A131, A133～A137, A139, A144, A145, A146, A148, A149, A150, A160～A164, A171～A176, K101, K102, K106, K107, K108, K109, K110, K111, CNS2x2.5 x3, CNS1.7x2 x2, CNM1.7x2.5, T-CNS1.4x3.5 x2, CNL-D1.4x2.5 x2, CNL-D1.4x3 x2, W6, W40 x4)	1	
A104	Mount ring	1	
A105	Mount spring	1	23903-A105

Parts No.	Description	Quantity	Interchangeability
A106	Mount retainer screw	5	23903-A106
0-A107	Mount lock button assy. (A107, A108, A109)	1	23903-0-A107
A110	Mount lock button spring	1	24300-A110
A111	Self-timer slide	1	
0-A112	Self-timer slide seat assy. (A112, A113)	1	
A114	Self-timer slide click spring	1	
A118	Buzzer lug plate	1	
0-A126	X-terminal assy.	1	24000-0-A116
A131	Light seal	2	23906-A131
A132	Front board retainer screw	4	23903-A132-01
A133	Lock pin supporter plate	1	
A134	Diaphragm coupler ring retainer A	1	24300-A134
A135	Restitution spring	1	23903-A135
A136	Light seal	1	24300-A136
A137	Scratch protection seal	1	23903-A137
A139	Diaphragm coupler ring retainer B	1	
A144	Exterior tube B	2	24300-A144
A145	Connector pin	5	24300-A145
A146	Connector pin spring	6	24300-A146
A148	Connector pin B	1	24300-A148
A149	Insulation collar	6	24300-A149
A150	Insulation plate	1	24300-A150
0-A160	Lighting switch button assy. (A160, A161, A162, A163, A164, A165, A166)	1	

Parts No.	Description	Quantity	Interchangeability
A171	Preview lever seat	1	
A173	Preview lever retainer screw	1	
0-A174	Coupling lever assy. (A174, A172)	1	
A175	Preview lever spring	1	
A176	Preview lever	1	
A200	Back cover assy. (A201, A202, A203, A207, A208, A209, A210, A211, A212, A213, A214, A215, A219, A222 x4, A230 x2)	1	
0-A204	Pressure plate assy. (A204, A205, A206)	1	
A214	Memo holder	1	
A215	Memo holder retainer screw	1	65538-Y52
A220	Pressure plate cover	1	23903-A220
A230	Light seal	2	23903-A230
A300-000C -000B	Top cover assy. (A301, A302, A303, A308, A318, A320 x2, A321, A322, A323, A324, A325, A326, A327, A328, A330, A331, A332, A335, A336, A337, A339, A340 x2, A344 x2, A348, A349, CSS1.7x4 x4, T-CNS1.4x5 x2)	1	
A302	LCD display window	1	
A303	LCD light seal	1	
A308	LCD lighting window	1	
A318	Switch board	1	
A320	Control button	2	
A321	Control switch	1	23903-A321
A322	Accessory shoe	1	23903-A322

Parts No.	Description	Quantity	Interchangeability
A323-000C -000B	Accessory shoe spring	1	23903-A323-000C -000B
0-A324	Accessory shoe base assy. (A324, A325, A344 x2)	1	
A326	Contact spring A	1	23903-A326
A327	Contact spring B	1	23903-A327
A328	Collar	1	23903-A328-02
A330	Insulation washer	1	23903-A330-02
A331	SW pin	1	23903-A331
A332	Indication plate	1	23903-A332
A333-000C -000B	Top cover retainer screw A	2	24300-A333-000C -000B
A334-000C -000B	Top cover retainer screw B	1	23903-A334-000C -000B
A335	Shutter indicator base	1	
A336	Window A	1	23903-A336
A337	Window B	1	24300-A337
A339	Insulation tape	1	23903-A339
A340	Insulation tape	2	24300-A340
A342-000C -000B	Top cover retainer screw C	2	23903-A342-000C -000B
A347	Accessory shoe retainer nut	4	23903-A347
A348	Shutter indicator plate	1	
A349	Shutter indicator plate adhesive tape	1	
A350	Retainer screw	1	23903-A348
0-A401-000C -000B	Bottom cover assy. (A401, A60, A402, A408)	1	
A402	Insulation tape	1	

Parts No.	Description	Quantity	Interchangeability
A405	Battery cap	1	23903-A405
A408	Scratch protection tape	1	23906-A408
0-B000	Mirror housing complete assy. (B1~B7, B9~B19, B21, B23, B24, B25, B27, B28, B30~B39, B41, B42 x2, B43, B44, B47, B51~B55, B60, B61, B70, B72, B73, B75, B81, B83, B84, B86, B92, B97, B101, B102, B103, B105, B107, B108, B109, B111, B201, B202, B203 x2, B204, B205 x4, B206, B207, B208, B209 x2, B210, B215, B241, B242, B243, B245~B248, I 200, I 211, L1, M21, M23, M26, M27, CSS1.7x1.6 x2, CNS1.4x1.4 x4, CNS1.7x1.6 x4, CNM1.4x1.5 x3, CNM1.7x1.8 x2, CNM1.7x2.5 x2, CNM1.7x4.5, CNL-D1.4x1.6, CNL-D1.4x2 x3, CNL-D1.4x5, CNL-D1.4x5.5, CNL-E1.4x4, CNL-F1.7x2.5, W*, W57, W89 x2, W106, LW10 x2, LW20)	1	
B4	Supporter plate, right	1	
B5	Supporter plate, left	1	
B6	Supporter plate, left retainer screw	1	
B7	Hook lever	1	
B8	Hook lever axis	2	
B9	Slide plate retainer nut A	1	
B10	Slide plate retainer nut B	1	
0-B11	Mirror actuator lever assy. (B11, B210)	1	
0-B12	Diaphragm coupler lever assy. (B12, B13, B15, B81, B83, B84, B208)	1	
0-B16	Restitution link A assy. (B16, B17, B19, B36)	1	
B18	Collar A	1	24300-B18
B23	Release lever shaft	1	24300-B23
B24	Release lever	1	24300-B24
B25	Restitution actuator lever hook plate	1	23906-B25

Parts No.	Description	Quantity	Interchangeability
B28	Mirror up lever	1	
0-B30	Restitution actuator lever assy. (B30, B31, B33, B47)	1	
0-B34	MD & TL switch lever assy. (B34, B35, B39)	1	
B38	Shock absorber lever	1	
B39	Insulation tube	1	
B40	Stopper plate	1	
B41-00A	Shock absorber rubber A (L=2.0mm)	1	
-00B	" B (L=2.2mm)		
-00C	" C (L=2.4mm)		
B43	Slide plate stopper collar	1	
B44	Charge roller	1	
B45	Spacer	1	
B51	Mirror actuator collar	1	
B52-00A	Shock absorber collar A (D=4.4mm)	1	23903-B52-00A
-00B	" B (D=4.0mm)		-00B
-00C	" C (D=3.8mm)		-00C
-00D	" D (D=3.6mm)		-00D
-00E	" E (D=3.4mm)		-00E
B54	Diaphragm actuator lever restitution collar	1	
0-B55	Mirror seat assy. (B55, B2, B3, B201, B202, B203 x2, B204, B205 x4, B206, B209, LW10 x2)	1	
B60	Light seal	1	24300-B60
B72	Light seal plate	1	
B73	Light seal plate adhesive tape	1	
B75	Cover	1	
0-B90	Dumper plate assy. (B90, B91)	1	

Parts No.	Description	Quantity	Interchangeability
B93	Spring hooker	1	
B94	Friction washer	1	
B101-00A -00B	Mirror seat restitution spring A " B	1	
B102	Diaphragm actuating lever spring	1	24300-B102
B103	Stop-down spring	1	
B105	Hook lever restitution spring	1	
B107	Release lever restitution spring	1	24300-B107
B108	Mirror flip-up spring	1	
B109	Mirror restitution spring	1	
B111	Shock absorber lever spring	1	
B112	Dumper plate spring	1	
B201	Light seal curtain	1	23906-B201
B203	Collar	2	23903-B203
B207	Washer	1	
B215	Mirror adhesive tape	1	23906-B215
B238	Mirror seat light seal	2	24300-B238
B239	Mirror restitution spring silencer	1	24300-B239
0-B241	Stop-down lever assy. (B241, B242, B243)	1	
0-B245	Slide plate assy. (B245, B246, B247, W106)	1	
B248	Slide plate spring	1	
B400	Mirror flip-up governor (B401, B402, B403, B404 x3, B405, B406, B407, B409, B410, B412)	1	

Parts No.	Description	Quantity	Interchangeability
0-C1	Top mech. plate assy. (C1, C13, C20, C27, C28, C29, C37, C43, C46, C63, C66, C142, F6)	1	
0-C2	Winding seat assy. (C2, C6, C16, C17, C18, C19, C41, C53, C82, C83, C84, C85, C86, C87, C90, C91, C93)	1	
C5	Winding lever click cam	1	
C7	Winding lever friction spring	1	23903-C7-01
C8	Winding lever nut	1	23903-C8
C12	Winding spring hook collar	1	
C15	Counter dial indicator	1	
C16	Receiving claw	1	24300-C16
C17	Winding lever click spring	1	
0-C18	Transporting claw assy. (C18, C86, C89)	1	24300-0-C18
0-C19	Counter dial actuator lever assy. (C19, C84)	1	24300-0-C19
0-C22	Winding shaft assy. (C22, C48, C140, C141, C154, C201)	1	
C25	Counter dial retainer plate	1	23903-C25
0-C26	Winding stopper assy. (C26, C42)	1	24300-0-C26
C30	Main gear	1	24300-C30
C31	2nd gear	1	24300-C31
C32	2nd gear shaft	1	24300-C32
C33	Sprocket gear	1	24300-C33
0-C34	Counter dial assy. (C34, C35)	1	
C36	2nd gear washer	1	24300-C36

Parts No.	Description	Quantity	Interchangeability
C40	Sprocket shaft pin	1	24300-C40
C54	Counter dial indicator retainer screw	1	
C57	Counter dial spring	1	23903-C57
C63	Cam lever spring	1	23903-C63
C64	Silent ratchet spring	1	23903-C64
0-C69	Winding lever assy. (C69, C70)	1	
C72	Winding shaft retainer	1	24300-C72
C73	Transporting marker	1	23903-C73
C82	Receiving claw retainer collar	1	
C83	Receiving claw spring	1	24300-C83
C87	Counter dial transporting gear	1	24300-C87
C90	Transporting claw spring	1	
C91	Counter dial actuator lever spring	1	
C92	Top cover retainer nut	1	
C93	Shutter speed fixing lever	1	
0-C101	Bottom mech. plate assy. (C101, C116, C118, C120, C147, C156)	1	
0-C102	Winding guide plate assy. (C102, C103, C104, C112, C113, C114, C124, C127)	1	
0-C105	R lever assy. (C105, C119)	1	23903-0-C105
0-C106	Winding lever ratchet wheel assy. (C106, C121, C122, C128)	1	23903-0-C106-01
C107	Winding lever ratchet	1	23903-C107
0-C108	Winding hook lever assy. (C108, C157)	1	

Parts No.	Description	Quantity	Interchangeability
C109	Sprocket shaft	1	
C111	Plate retainer screw	1	
C117	R button	1	
C124	Winding hook coupler spring	1	
C125-02	Hook lever spring	1	
C126	R lever spring	1	23903-C126
C127	Mirror charge lever spring	1	23903-C127
0-C129	Shutter charge lever assy. (C129, C115, C123)	1	23903-0-C129
C130	Winding ratchet collar	1	23903-C130
C131	Sprocket collar	1	23903-C131
C132	Sprocket	1	23903-C132
C133	Sprocket spring	1	23903-C133
C135	Sprocket pin	1	
C137	Winding shaft restitution spring	1	
C139	Winding lever cover	1	
C141	Winding ratchet spring	1	24300-C141
C144	Shutter charge collar	1	23903-C144
C145	Winding ratchet spring	1	23903-C145
C146	Seat plate retainer screw	4	23903-C146
C148	Bottom release lever spring	1	
C149	Bottom release lever	1	
C158	MD guide screw	1	
C202	Spool cam	1	23903-C202
C203	Friction ring	1	23903-C203
0-C204	Spool assy. (C204, C205 x14, C206, C208)	1	23903-0-C204

Parts No.	Description	Quantity	Interchangeability
C207	Joint	1	
C209	Joint cover	1	
C210	Spool cam receptacle	1	23903-C210
C211	Light seal washer	1	23903-C211
C212	Joint retainer screw	1	
C213	Spring washer	1	23906-C213
0-D6-000C -000B	Rewinding knob assy. (D6, D1, D2, D3, D4, D5, CNS1.4x2 x2)	1	
D7	Rewinding shaft	1	
D8	Rewinding shaft spring	1	
0-D10	Rewinding shaft bearing assy. (D10, D9)	1	
0-D11	ASA/ISO dial assy. (D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D23 x3)	1	
D24	Nut	1	
D25	Ring sheet	1	
0-E000	Shutter block	1	
F3	Shutter dial seat retainer screw	1	
F17	Nut	1	
F18	Shutter dial	1	
F19	Lock button	1	
F20	Click spring	1	
F21	Shutter dial rubber ring	1	
F100	Shutter dial block	1	
G100	Diaphragm control block	1	
I 12	Contact spring	4	24300-A369

Parts No.	Description	Quantity	Interchangeability
I 35	Connector board	1	
I 200	MD & TL switch	1	
I 211	MD & TL distributing wire holder	1	
I 300	Self-timer switch	1	
I 305	Cord holder	1	
0-I 402	Release pin collar assy. (I 402, I 406, I 407)	1	
I 403	Insulation sheet	1	
0-I 404	Bottom release switch board assy. (I 404, I 405, I 408)	1	
I 500	Wind completion switch	1	
K101	f-volume	1	
0-K102	Diaphragm coupler ring assy. (K102, K106, K107, K108, CNL-D1.4x2.5 x2)	1	
K109	Insulation sheet	1	
0-K110	f-volume compensation VR assy. (K110, K111)	1	
L1	Mirror	1	23906-L1
L2	Fresnel lens	1	
L3	Penta prism	1	
0-L4	Eyepiece assy. (L4, L5)	1	
L6	Small mirror A	3	
L7	Small mirror B	1	
L8	Small mirror A adhesive tape	3	
L10	Prism	1	
L11	Small mirror B adhesive tape	1	

Parts No.	Description	Quantity	Interchangeability
M2	Prism seat	1	
M4	Finder mask	1	
M5	Fresnel lens frame	1	23906-M5
M8	Prism protection sheet	2	23903-M8
M22	Fresnel lens holder A	1	24300-M22
0-M23	Fresnel lens holder B assy. (M23, M26, M27)	1	24300-0-M23
M28	Focus adjusting screw	3	23906-M28
M30	Prism installing plate		
0-M31	LCD installing plate assy. (M31, M32, M33, M34)	1	
M35	Prism installing plate adhesive tape	1	
M201	Eyepiece frame	1	
M202	Light metering lens	2	23903-N3
M203	Eyepiece protection	1	24300-N7
M204	Shoe contact piece C	1	
M205	Shoe board	1	
M206	Light seal	1	23906-B63
N300	Piezo-electric buzzer	1	
Θ1	Lamp	1	
Θ2	Self-timer LED	1	
S100	Release magnet block	1	
T1	Cell frame	1	
T2	Condenser lens	1	
T100	P. C. board assy.	1	
T700	Release magnet P. C. board assy.	1	

LIST OF STANDARD PARTS

Product No.24500

PENTAX *super*A1

Small screws:

Description (Code)	Surface treatment	Position of use	Quantity
CSS1.7x3.0(1102301)	Black nickel	A1, A10	2
		A1, A2, A4	2
CSS1.7x3.0(1102300)	Nickel	A1, 0-A401	3
CSS1.7x3.5(1102351)	Black nickel	A1, 0-C1	1
CSS1.7x4.0(1102401)	"	A300, A322	4
CNS1.4x1.4(1081145)	Black nickel(PB-G50)	0-B000, 0-M23	2
CNS1.4x1.4(1081141)	Black nickel	0-B000, M22	2
CNS1.4x1.6(1081161)	"	0-M31, T100	2
CNS1.4x2.0(1081201)	"	S100, 0-B000	2
CNS1.4x2.5(1081251)	"	0-C2, C17	1
CNS1.4x3.5(1081351)	"	A1,0-B000	1
CNS1.7x1.5(1082151)	"	0-B000, B40	1
CNS1.7x1.6(1082161)	"	0-B000, B400	2
		0-B000, T700	2
		A1	1
CNS1.7x2.0(1082201)	"	A100, K101	2
		C40, C109	1
CNS1.7x2.5(1082251)	"	A1, 0-C101	
		A1, F100	2
CNS1.7x3.0(1082301)	"	A3, A100, A118	1
CNS1.7x3.5(1082351)	"	0-B000, M2	2
CNS1.7x4.0(1082401)	"	A1, 0-C2	1
CNS1.7x5.0(1082501)	"	A100, I 300	1
CNS1.7x5.7(1082571)	"	A1, 0-A6	2

Description (Code)	Surface treatment	Position of use	Quantity
CNS2.0x2.5(1083251)	Black nickel	A100, A139	1
		A100. A133	1
		A100, A134	1
CSM1.7x3.5(1112351)	"	A1, 0-C26	1
CSM1.7x5.5(1112551)	"	A1, A13	1
CNM1.4x1.5(1091151)	"	0-B000, B4	3
CNM1.7x1.8(1092181)	"	0-B000, B5	2
CNM1.7x2.2(1092221)	"	A1, 0-D10	3
CNM1.7x2.5(1092251)	"	A1, 0-A11	2
		A100, A133	1
		0-B000, B75	2
CNM1.7x3.0(1092301)	"	A100, 0-B000	2
CNM1.7x4.0(1092401)	"	A1, T100	1
		A1, I 500	1
CNM1.7x4.5(1092451)	"	0-B000, I 200	1
CNM2.0x3.0(1093301)	"	A100, 0-B000	2
CNL-B1.7x3.5(1152351)	"	A1, B45	1
CNL-D1.4x1.6(1171161)	"	0-B000, 0-B16	1
		0-B30, B44	1
		0-C2, 0-C18, C87	1
		0-C2, 0-C19	1
CNL-D1.4x1.8(1171181)	"	0-B000, 0-B90, B93	1
CNL-D1.4x2.0(1171201)	"	0-B000, 0-B16	1
		0-B000, B38	1
		B4, T100	1
		0-C101, C149	1
CNL-D1.4x2.5(1171251)	"	0-A324, A326	1
		0-C2, C93	1
CNL-D1.4X3.0(1171301)	"	A100, I 35	2
CNL-D1.4x4.5(1171451)	"	0-B000, B7, B8	1
CNL-D1.4x5.5(1171551)	"	0-B000, B8, B28	1

Description (Code)	Surface treatment	Position of use	Quantity
CNL-D1.7x2.5(1172251)	Black nickel	A1, 0-B000	2
		A1, 0-C102	2
		A100, G100	2
		A100, 0-M31	2
CNL-D1.7x3.0(1172301)	"	0-C26, C72	1
CNL-D1.7x3.0(1172309)	Black zinc	A100, 0-E000	3
CNL-D1.7x4.0(1172401)	Black nickel	0-B000, M2, M201	2
CNL-D1.7x4.5(1172451)	"	A1, 0-A21	1
		0-B000, T1, T100	2
CNL-D1.7x5.0(1172501)	"	A1, A13, 0-A53	1
CNL-E1.4x4.0(1181401)	"	0-B000, 0-B11, 0-B241	1
CNL-F1.7x2.5(1192251)	"	0-B000, B24	1
T-CSS1.4x3.5(1601351)	"	A100, 0-A112	1
T-CNS1.4x2.8(1581281)	"	0-L4, M201	1
T-CNS1.4x5.0(1581281)	"	A300, A335	2
T-CNS1.7x4.0(1581501)	"	A200, A214	1
T-CNL-D1.7x4.0(1672401)	"	M201, M204, M205	2
Set-T1.4x3.5	"	0-M31	1
Set-T1.7x4.0	"	L3, M2	2

Washers:

Description	Material	Thickness	Position of use	Quantity
W1	Brass	0.1, 0.15, 0.2	T100, 0-M31	2
W2	"	0.1	A1, 0-A401	2
		0.1, 0.15, 0.2	0-C101, C107	1
		0.1, 0.15, 0.2	0-B000, B400	2
		0.7	A1, F100	1
W3	"	0.9	A1, T100	1

Description	Material	Thickness	Position of use	Quantity
W6	Brass	0.1, 0.15, 0.2	A100, A139	1
		0.1, 0.15, 0.2	A100, A149	1
		0.1, 0.15, 0.2	A100, A134	1
W8	"	0.05, 0.07	0-C101, 0-C108	1
		0.1	0-B000, B7	1
			0-B000, B28	1
		0.15	A1, C33	1
W14	"	0.1	0-C106, C144	1
		0.05, 0.1, 0.15, 0.2	A1, 0-B000	2
W17	"	0.2, 0.3, 0.4	0-C101, 0-C204	1
W20	"	0.2	T100	1
W27	"	0.05, 0.07	C82, C93	1
W28	"	0.3	C109, C133	1
W40 (B-B0)	"	0.2	A2, A4	2
W57	"	0.2	0-B000, 0-B12	1
W65	"	1.0	A1, T100	1
W89	"	0.1	0-B000, B18	1
		0.2	0-B000, B38	1
W91	"	0.05, 0.07	C25, 0-C34	1
W97	"	0.1	F17, F18	1
W103	"	0.1, 0.15	0-D11-01, D24	1
W109	"	0.05, 0.08	B8, B245	1

Lock washers:

Description	Position of use	Quantity
LW10	0-B000, B25	1
	0-B55, B203	2
LW13	0-C101, C107	1
	0-C101, 0-C105	1
	C109, C133	1
LW20	0-B000, 0-B30	1

Ball:

Description	Material	Diameter	Position of use	Quantity
BO 1.5	Steel	1.5 mm	0-A112, A114	1

Lead wires:

Lead wire No.	Length	Color	Position of use	Quantity
1	55 mm	Gray	0-E000, M204	1
2	30	Brown	0-E000, T100	1
3	35	Red	0-E000, T100	1
4	30	White	0-E000, T100	1
5	40	Green	0-E100, F100	1
6	40	Orange	T100, F100	1
7	40	Sky blue	T100, F100	1
8	35	Blue	T100, ⊖2	1
9	40	Red	T100, F100	1
10	40	Blue	T100, F100	1
11	65	Sky blue	G100, T100	1
13	35	Purple	I300, T100	1
14	40	Black	⊖2, T100	1
15	50	Gray	A327, M204	1
16	35	Gray	G100, M205	1
17	35	Pink	G100, T100	1
18	65	Yellor	G100, T100	1
19	20	Black	G100	1
20	70	Purple	I500, T100	1

Lead wire No.	Length	Color	Position of use	Quantity
21	65 mm	Sky blue	0-I404, T100	1
22	70	Orange	0-I402, T100	1
23	90	Gray	0-A53, 0-A126	1
24	40	Red	0-A11, T100	1
25	45	Purple	I200, T100	1
26	50	Purple	I200, T100	1
27	50	Green	I200, T100	1
28	35	Blue	T100, T700	1
29	35	Orange	T100, T700	1
30	30	Blue	S100, T100	1
31	30	Orange	S100, T100	1
32	30	Pink	0-A160, T100	1
33	65	Gray	0-A126, M205	1
34	13	Yellor	K101, T100	1
35	55	Yellor	K101, T100	1
36	75	Pink	T100, M205	1
37	55	Sky blue	T100, M205	1
40	25	Black	T100	1
41	25	Purple	T100	1
44	13	Brown	I35, T100	1
45	13	Red	I35, T100	1
46	13	Orange	I35, T100	1
47	13	Yellor	I35, T100	1

Lead wire No.	Length	Color	Position of use	Quantity
48	13	Green	I35, T100	1
49	13	Blue	I35, T100	1
50	15	Yellor	K101, 0-K110	1

PRODUCT No.24500

PENTAX
SUPER PROGRAM

SERVICE MANUAL

TABLE OF CONTENTS

		Page
1.	SPECIFICATIONS	2
2.	DISASSEMBLY PROCEDURES I	4
3.	ASSEMBLY PROCEDURES I	10
	Wind completion switch	13
	Level adjustment for Aperture control voltage	18
	ASL (Auto Speed Light) adjustment	23
4.	DISASSEMBLY PROCEDURES II	26
	Front board assy. / Mirror housing assy. disassembly procedures	26
5.	ASSEMBLY PROCEDURES II	29
	Front board assy. / Mirror housing assy. assembly procedures	29
	f-VR resistance value adjustment	29
	MD and TL switch position adjustment	31
	LCD position adjustment	33
	Mount connector pin checking	35
6.	LIST OF SERVICING TESTERS, JIGS AND TOOLS FOR 24500	38

SPECIFICATION

Type ------- 35mm SLR camera with multi-mode automatic controls, electronically-controlled focal plane shutter, and open-aperture center-weighted Throgh-The-Lens metering.

Six Exposure Control Modes: Programmed AE, Aperture-priority AE, Shutter-priority AE, Metered Manual, TTL Auto Flash, and Programmed Auto Flash mode.

Exposure Control Mode Setting: By using combination of settings on shutter dial and aperture ring of "A" series lenses.

Film:------- 35mm film

Format:----- 24 x 36mm

Lens Mount:--Pentax KA Bayonet (A Pentax K bayonet mount with electrical contact.)

Shutter:----- Seiko MFC-E3 vertical-run metal focal-plane shutter, automatic exposure and manual setting electronically-controled speeds from 15 to 1/2000 sec., 1/125., and B. Electromagnetic shutter release with release button lock.

Exposure Indication in Viewfinder: Liquid Cristal Display (LCD) Automatic and manual shutter speeds, automatically set lens apertures, exposure factor warning, shutter-speed setting error warning, battery life warning, and Programmed AE indication (P), LCD window illumination.

External Indication: Automatic and manual shutter speeds, Programmed AE indication (P) and shutter cocked indicator.

Flash Synchronization: Hot shoe (X-Synch contact, dedicated flash contacts), X-synch at 1/125 sec.

Dedicated Automatic Flash Coupling: Automatic setting of 1/125 sec. synch speed with dedicated automatic flash units. TTL-automatic flash control provides film-plane metering. Slower than 1/125 sec. synch flash photography is possible at Manual mode setting.

Self-Timer:-- Electronically controlled, delay time indication by flashing lamp and electronic buzzer.
12 sec. delay time. Possible to cancel at any time; initiate process by pressing shutter release button.

Viewfinder:---Silver-coated pentaprism finder with split-image/microprism focusing screen; shows 92% of the picture area, 0.82X magnification with 50mm lens at infinity; -1.1 Diopter eyepiece.

Mirror:------ Back-swing type instant-return mirror.

Film Loading: Magic-needle loading.

Film Transport: Single-stroke, rapid wind lever with 135° throw and 30° stand-off angle; LCD shutter cocked indicator; film advance and rewind indicator window. Accept Winder ME II, Moter Drive A.

Exposure Counter: Additive type, automatic resetting. Automatically sets shutter-speed at 1/1000 sec. up to 0 frame on the counter when shutter dial is set at AUTO or M.

Film Rewind:- Crank type.

Exposure Metering: Open aperture. Through-The-Lens, center weighted, average area metering system with GPD cell. Film-plane Metering for dedicated automatic electronic flashes.

Metering Range: EV1 (f/1.4 1sec.) - EV19 (f/16 1/2000sec. or f/22 1/1000sec.) with 50mmf/1.4lens and ASA/ISO 100 film.

ASA/ISO Range: 6 — 3200.

Exposure Compensation Exposure: Compensation dial indexed at 4X, 2X, 1X, 1/2X and 1/4X.

Depth-of-Field Preview: Via depth-of-field preview lever when aperture set manually.

Power Source: Two 1.5V alkaline or silver-oxide batteries or one 3V lithium battery.

Metering Circuit Main Switch: Switched on by shutter release button and remains on for about 30sec. shut-off by built-in timer.

Battery Warning: When batteries grow weak, LCD alternately flashes exposure desinations and '000' sign. When batteries exhausted, LCDs go blank and shutter locks.

Battery Cover: -- Standard camera back with spring catch, built-in memo holder/grip, fully interchangeable with Dial Data ME and Digital Data M.

Sizes: ---------- 131mmx86.5mmx47.5mm body only without batteries.

Weight: --------- 490g without batteries.

DISASSEMBLY I

1. Body covering

*	A19	Body covering, left
*	A20	Body covering, right

2. Bottom cover assy.

*	CSS1.7x3 x3	
*	0-A401	Bottom cover assy.
*	C117	R button

3. Winding lever and other related parts.

*	C139	Winding lever cover	
*	C8	Winding lever nut	Left handed screw Tools: 23600K-C134-A-2
*	0-C69	Winding lever assy.	
*	C7	Winding lever friction spring	
*	C92	Top cover retainer nut	Tools: 24500K-C92-A

4. Rewind knob assy.

*	0-D6	Rewind knob assy.	
*	D24	Nut	Tools: 23600K-D4-A-2
*	W103	for Adj.	
*	0-D11	ASA/ISO dial assy.	

5. Shutter dial and other related parts.

* Set Shutter dial to "L".

*	F17	Nut	Tools: 23903K-A346-A
*	W97	t=0.1	
*	F18/F21	Shutter dial	
*	F19	Lock button	

6. Top cover assy.

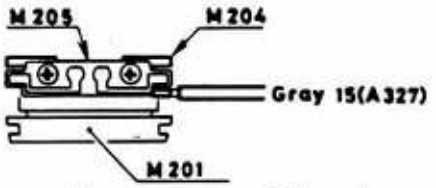


Fig. 1

- A333 x2 Top cover retainer screw A
- A342 x2 Top cover retainer screw C
- A334 Top cover retainer screw B
- Unsolder Gray lead wire (No. 15) on Shoe contact piece C (M204).
- A300 Top cover assy.

7. Unsoldering lead wires.

- Unsolder the four lead wires on P. C. board assy. (T100) at the bottom side of the body.

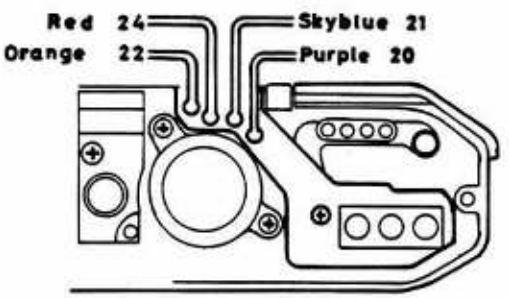


Fig. 2

8. Tripod seat

- CSM1.7x5.5
- CNL-D1.7x5
- 0-A53 Non-cord terminal assy.

* Not necessary to unsolder the lead wire on 0-A53.

- A13 Tripod seat

9. Connector assy.

- CNL-D1.7x4.5
- A25 Connector retainer screw

* Not necessary to unsolder Connector assy. (0-A21) on P. C. board.

10. SV block

* Be careful with the disassembling order of the following parts.

° CNM-1.7x4
° A41 Installing screw B
° R103 SV warning lever retainer screw

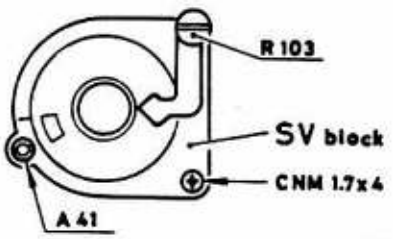


Fig. 3

11. Shutter dial block

° CNS1.7x2.5 Located under Shutter dial. Refer to Fig. 4.
° Install Nut (F17), Shutter dial (F18) and Lock button (F19) temporarily.
° Lift up LCD part.
° F3 Shutter dial retainer screw
° CNS1.7x2.5 Located next to F3.

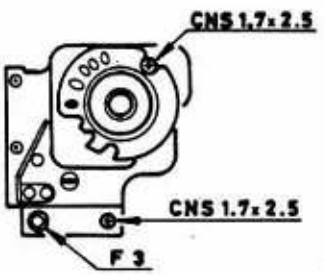


Fig. 4

12. Unsoldering lead wires.

° Unsolder Gray lead wire on Eyepiece frame (M201) and Brown, Red and White lead wires on P. C. board located under Shutter dial block (F100).

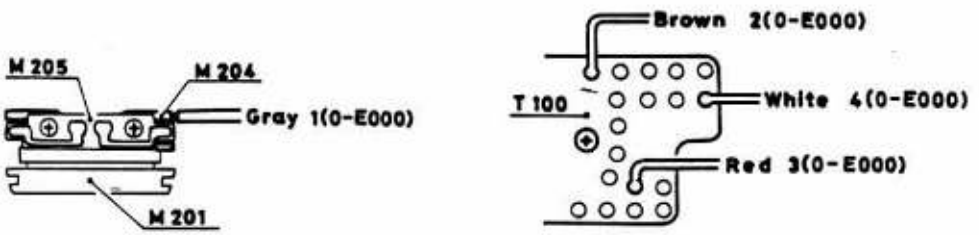


Fig. 5

33

13. Front board / Mirror housing compleate assy.

* Set the shutter in the cocked condition.

° CNL-B1.7x3.5 Spacer (B45) side.
° CNS1.4x3.5
° CNL-D1.7x2.5 x2 Located both sides of Eyepiece frame (M201).
° W14 Take care not to lose it.
° A132 x4 Front board retiner screw
° Front board assy. / Mirror housing compleate assy.

14. Shutter block

° A8 Shutter light seal cover
° CNL-D1.7x3 x3
° 0-E000 Shutter block

15. Film counter and other related parts.

* Remove Back cover assy.

° Unhook Counter dial spring (C57) from Counter dial retainer plate (C25).
° C25 Counter dial retainer plate
° C57 Counter dial spring
° W91 for Adj.
° 0-C34 Counter dial assy.
° C54 Counter dial indicator retainer screw
° C15 Counter dial indicator
° CNS1.7x4 x2
° 0-C2 Winding seat assy.

16. Joint cover

° C212 Joint retainer screw
° C213 Spring washer
° C207 Joint
° C209 Joint cover
° 0-C129 Shutter charge lever assy.
° C144 Shutter charge collar
° W14 t=0.1
° Install Joint (C207), Joint retainer screw (C212) and Spring washer (C213) temporarily.

17. Winding guide plate assy.

° 0-I402 Release pin collar
* Not necessary to unsolder the lead wire on 0-I402.
° C146 Seat plate retainer screw
° CNL-D1.7x2.5 x2
° 0-C102 Winding guide plate assy.

18. Bottom release lever

° CNL-D1.4x2
° C149 Bottom release lever
° C148 Bottom release lever spring

19. R lever assy.

° LW13
° 0-C105 R lever assy.
° C126 R lever spring

20. Wind completion switch

° CNM1.7x4
° I500 Wind completion switch
* Not necessary to unsolder the lead wire on I500.

21. Winding hook lever and other related parts.

° Unhook Winding ratchet spring (C145) from Winding lever ratchet (C107).
° LW13
° W2 for Adj.
° C107 Winding lever ratchet
° C130 Winding ratchet collar
° 0-C108 Winding hook lever assy.
° C125-02 Hook lever spring

22. Winding lever ratchet wheel assy. and other related parts.

° C212 Joint retainer screw
° C213 Spring washer
° C207 Joint
° 0-C106 Winding lever ratchet wheel assy.

°	C137	Winding shaft restitution spring
°	C12	Winding spring hook collar

23. Winding shaft assy.

°	CNL-D1.7x3	
°	C72	Winding shaft retainer
°	0-C22	Winding shaft assy.
°	C30	Main gear

24. Top mech. plate assy.

°	CSS1.7x3.5	
°	C146x2	Seat plate retainer screw
°	0-C1	Top mech. plate assy.

25. 2nd gear

°	C32	2nd gear shaft
°	C31	2nd gear
°	C36	2nd gear washer

26. Sprocket gear

°	CNS1.7x2	
°	C40	Sprocket shaft pin
°	C33	Sprocket gear
°	C64	Silent ratchet spring
°	W8	t=0.15

ASSEMBLY I

1. Sprocket gear

°	W8	t=0.15
°	C64	Silent ratchet spring
°	C33	Sprocket gear
°	C40	Sprocket shaft pin
°	CNS1.7x2	

Adhesive: Apply Threebond 1405D on the threads.

2. 2nd gear

°	C36	2nd gear washer
°	C31	2nd gear
°	C32	2nd gear shaft

Adjustment: When installing 2nd gear (C31), align the punch mark on C31 with the notch of Sprocket gear (C33).

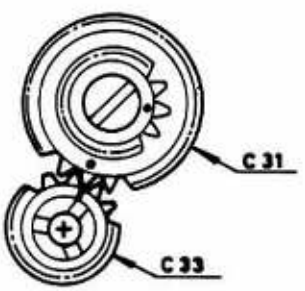


Fig. 6

3. Top mech. plate assy.

°	0-C1	Top mech. plate assy.
°	C146x2	Seat plate retainer screw
°	CSS1.7x3.5	

4. Winding shaft assy.

°	C30	Main gear

Adjustment: When installing Main gear (C30), align its punch mark with the punch mark on 2nd gear (C31).
Make sure that the punch mark on 2nd gear (C31) has been also aligned with Sprocket gear (C33).

37

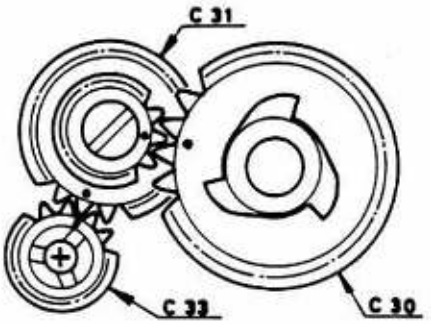


Fig. 7

- 0-C22 Winding shaft assy.
- C72 Winding shaft retainer
- W2 for Adj.
- CNL-D1.7x3

Note:

Use W2 underneath Winding shaft retainer (C72), in case of Winding shaft assy. (0-C22) touches against Winding shaft retainer when Winding mech. is being cocked.

5. Confirmation: Sprocket (Perforation) position

- Winding mech. is in the cocked positin, lightly push Sprocket toward the film aperture side to eliminate its play, Sprocket must be positioned in the range as shown in Fig. 8.

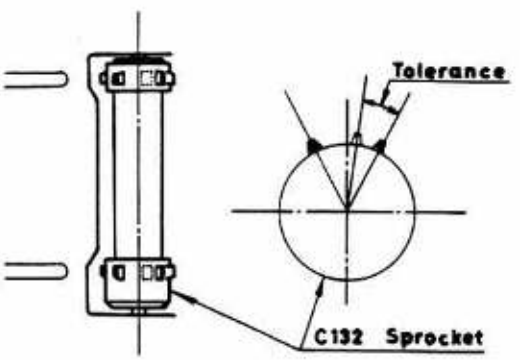


Fig. 8

Confirmation:

Within tolerance

A pair of Sprocket teeth should be positioned between the symmetrical position with the center of Sprocket and slightly shifted toward Winding lever side. Refer to Fig. 8.

Without tolerance

The center of Sprocket tooth should not be positioned the center of Sprocket.

Adjustment:

Adjustment can be made by changing the engagement of 2nd gear.

6. Winding lever ratchet wheel assy.

*	C12	Winding spring hook collar
*	C137	Winding shaft restitution spring

Adjustment:

Install Winding spring hook collar (C12) as shown in Fig. 9, then wind the spring several times and pull it toward Battery case assy. (0-A11). The proper spring tention will be made when the end of C137 reaches the position as shown in Fig. 9.

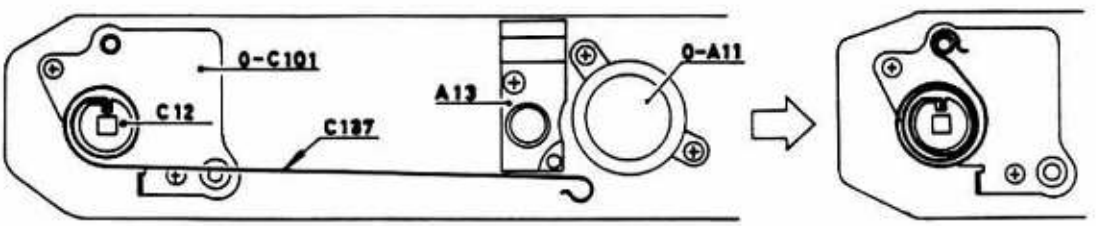


Fig. 9

*	0-C106	Winding lever ratchet wheel assy.
*	C207	Joint
*	C213	Spring washer
*	C212	Joint retainer screw --- install temporarily.

7. Winding hook lever assy. and other related parts.

*	C125-02	Hook lever spring
*	0-C108	Winding hook lever assy.
*	C130	Winding ratchet collar
*	C107	Winding lever ratchet
*	W2	for Adj.
*	LW13	

* Hook Winding ratchet spring (C145) to Winding lever ratchet (C107).

8. R lever assy.

*	C126	R lever spring
*	0-C105	R lever assy.
*	LW13	

39

9. Bottom release lever

- C148 Bottom release lever spring
- C149 Bottom release lever
- CNL-D1.4x2

Adjustment:

Bend the contact piece of Bottom release SW board assy. (0-I404) so that the clearance between 0-I404 and Bottom release lever (C149) becomes approx. 1.5mm as shown in Fig. 10.

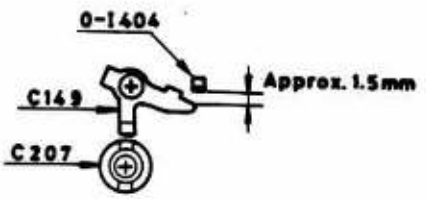


Fig. 10

10. Wind completion switch

- I500 Wind completion switch
- CNM1.7x4

Adjustment:

Set the camera in the cocked condition.

At first, set the eccentric screw on Winding hook lever assy. (0-C108) the farthest position from the moving contact piece of Wind completion SW (I500) by turning the eccentric screw.

Secondly, bend the moving contact piece of I500 until it contacts with the eccentric screw on Winding hook lever assy. (0-C108).

Thirdly, the clearance 0.3mm between the moving contact piece and the fixed contact piece should be adjusted by turning the eccentric screw.

Confirmation:

With the shutter in the cocked position, Wind completion SW should be turned OFF when Winding lever is closed all the way against the camera body.

With the shutter in the uncocked position, Wind completion SW should be turned ON. Refer to Fig. 11 next page.

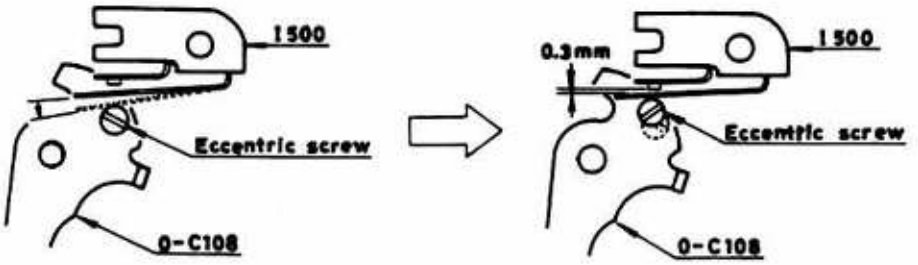


Fig. 11

11. Winding guide plate assy.

°	0-C102	Winding guide plate assy.
°	C146	Seat plate retainer screw
°	CNL-D1.7x2.5 x2	

* Loosen Joint retainer screw (C212).

°	0-C129	Shutter charge lever assy.
°	C209	Joint cover
°	C212	Joint retainer screw

12. Winding seat assy.

When installing Winding seat assy. (0-C2), engage Counter dial transporting gear with Main gear (C30) so that Transporting claw assy. is positioned as shown in Fig. 12.

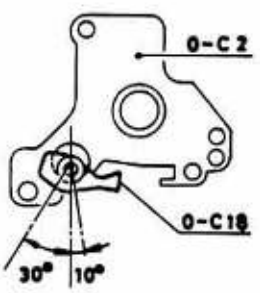


Fig. 12

°	0-C2	Winding seat assy.
°	CNS1.7x4 x2	

13. Counter dial assy.

°	0-C34	Counter dial assy.
°	C57	Counter dial spring
°	W9	for Adj.

° C25 Counter dial retainer plate
° Hook Counter dial spring (C57) to Counter dial retainer plate (C25) and apply Pliobond on the end of C57.
° C15 Counter dial indicator
° C54 Counter dial indicator retainer
° Install Winding lever temporarily.
° Install Back cover assy.

Confirmation:
Make sure that Film counter functions (advancing/returning) properly.

14. Shutter block

° 0-E000 Shutter block
° CNL-D1.7x3 x3

15. Adjustment: T-Adjuster

Testers: Shutter tester (7F-9A2)
T-Adjuster (0C-2 or TA-07/11-01)
T-Adjuster cord (TA-240)

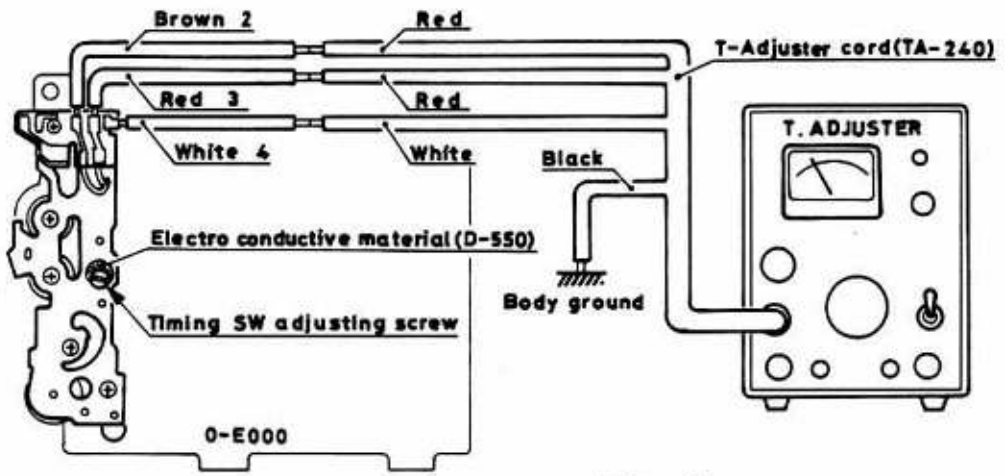


Fig. 13

1) Connect T-Adjuster cord (TA-240) as shown in Fig. 13.
2) Set MEASURE-CHECK SW of T-adjuster to CHECK side.
Set the voltage at 2V. In this condition, Release the shutter.
2nd curtain should be held by the electromagnet (Time condition).
3) Set MEASURE-CHECK SW to MEASURE side and the voltage at 2.8V.
4) Set TIME SETTING DIAL to 0.5ms.
5) Adjust Timing SW by the adjusting screw so that Shutter speed becomes approx. 0.5ms (0.45 ~0.6ms).
6) After adjusting Timing SW, apply Electro-conductive material (Exclusively use DOTITE Ag-type D-550) on the adjusting screw.

16. Front board assy. / Mirror housing installation

° A8 Light seal plate

* Make sure that the shutter is in the cocked condition and Mirror housing is in the uncocked condition for the installation.

° CNL-B1.7x3.5
° CNS1.4x3.5
° A132x4 Front board retainer screw

Confirmation:

Check the shutter releasing position as follows:

° Release the shutter while pressing down the mirror seat with a finger
° Let the mirror seat flips-up gradually, check the shutter releasing position.
* The shutter can be released by pushing the lever in the arrow direction in Fig. 14.
° The shutter should be released when the bottom side of Mirror seat reaches between B and C as shown in Fig. 15.

Position A

The bottom side of Light seal (B60).

Position B

With Slide plate assy. (0-B245) fliped-up, the position where the bottom side of Mirror seat reaches in between A and C.

Position C

With Slide plate assy. (0-B245) fliped-up, the position where the bottom side of Mirror seat reaches the same level as the top of Slide plate assy. (0-B245).

Adjustment:

If the releasing position is not in the range as mentioned above, adjustment can be made by bending Release lever (B24).

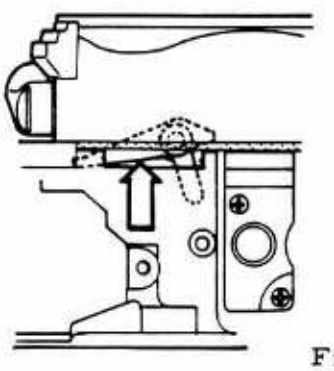


Fig. 14

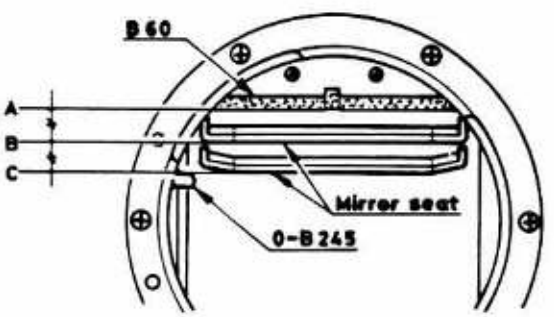


Fig. 15

° W14 for Adj. Located between the body proper and Mirror housing.

° CNL-D1.7x3 x2

43

17. Adjustment: Mechanical back focus adjustment

- W14 for Adj.
- Standard 45.46mm ±0.04mm

18. Soldering lead wires.

- Solder the four lead wires from Shutter block.

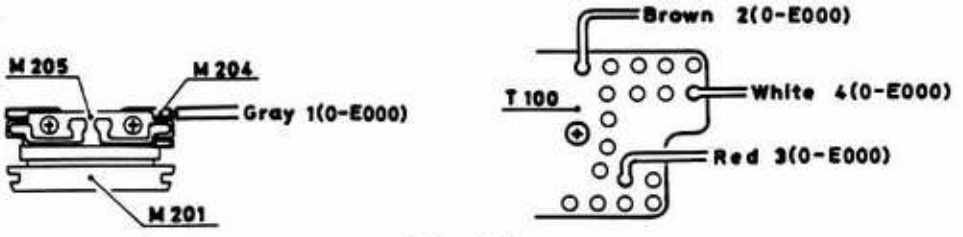


Fig. 16

19. Shutter dial block

- F100 Shutter dial block
- F3 Shutter dial retainer screw
- CNS1.7x2.5 ---- Located next to F3.
- Set Shutter dial to "L" for removing Nut (F17), Shutter dial (F18) and Lock button (F19). Tools: 23903-A346-A
- CNS1.7x2.5 ---- Located under Shutter dial.
- Install F19, F18 and F17 temporarily.

20. SV block installation

* Be careful with the installing order.

- R103 Exposure factor warning lever retainer screw
- A41 Installation screw B
- CNM1.7x4

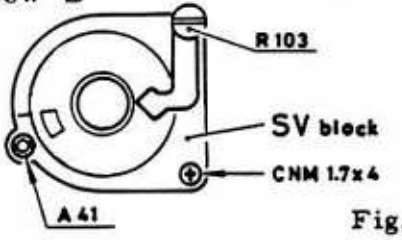


Fig. 17

21. Tripod seat

- A13 Tripod seat
- 0-A53 Non-cord terminal assy.

° CNL-D1.7x5
° CSM1.7x5.5

22. Connector assy.

° CNL-D1.7x4.5
° A25 Connector retainer screw

23. Soldering lead wires.

° Solder the four lead wires on T100 at the bottom side of the body proper.

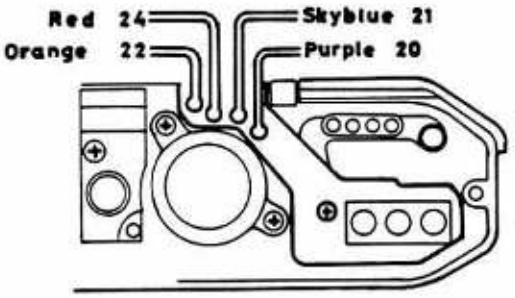


Fig. 18

24. Adjustment: Level adjustment for Aperture control voltage.

Testers: Occilloscope
Regulated DC power supply
ML-245 (Master lens for 245)

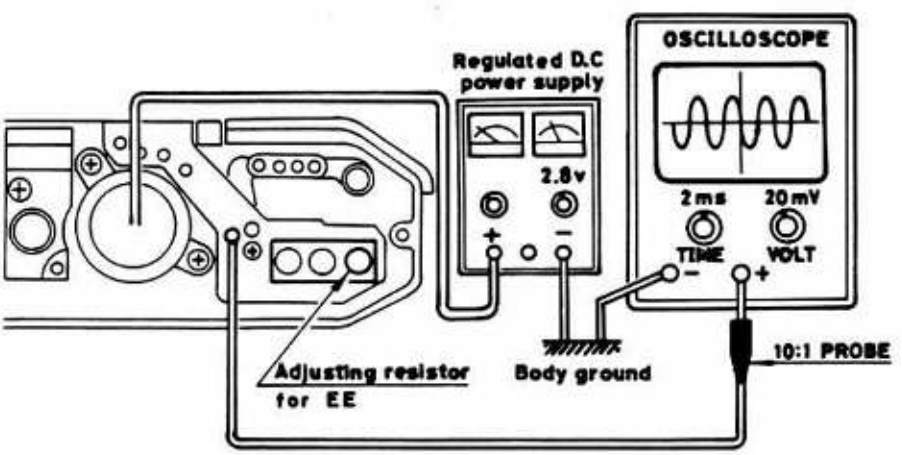


Fig. 19

Aperture control voltage can be measured as the following procedures:

- Mount Master lens for 245 (ML-245) on the camera and set the aperture of Master lens to the "A" position.
- Connect wires as shown in Fig. 19 and supply 2.8V to the camera.
- Set Shutter dial at Auto, and set the aperture so that it becomes smaller than f-2.8 by changing ASA speed dial or the brightness of the light source.
- At this time, the output voltage should be displayed 450mV ±50mV on the screen of Occilloscope.
- If this reading is out of range, the adjustment can be made by turning Adjusting resister for EE as shown in Fig. 19.

25. Removal of Shutter dial and Winding lever.

- Set Shutter dial (F18) to "L".
- F17 Nut — Tools: 23903K-A346-A
- F18 Shutter dial
- F19 Lock button
- 0-C69 Winding lever assy.

26. Top cover assy.

- Solder Gray lead wire of Top cover assy. to Shoe contact piece C (M204).
- A300 Top cover assy.
- A333x2 Top cover retainer screw A
- A342x2 Top cover retainer screw C
- A334 Top cover retainer screw B

27. Rewind knob assy.

- 0-D11 ASA/ISO dial assy.
- W103 for Adj.
- D24 Nut — Tools: 23600K-D4-A-2
- 0-D6 Rewind knob assy.

28. Shutter dial and related parts

- F19 Lock button
- F18/F21 Shutter dial
- W97 t=0.1
- F17 Nut — Tools: 23903K-A346-A

29. Winding lever assy. and other related parts

° C92 Top cover retainer nut

Tools: 24500K-C92-A
Adhesive: Cemedine 575

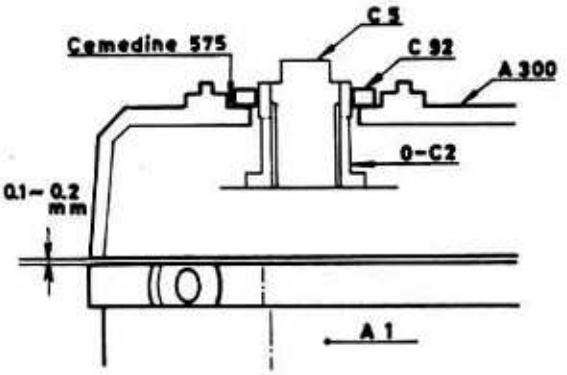


Fig. 20

Fasten Top cover retainer nut (C92) until the clearance between the bottom side of Top cover and the part of body proper as shown in Fig. 20 becomes 0.1 - 0.2mm.

Adhesive: Apply a screw lock agent (Cemedine575) as shown in Fig. 20.

° C7 Winding lever friction spring
° 0-C69 Winding lever assy.
° C8 Nut Tools: 23600K-C134-A-2

30. Check the functions as follows:

° Install Temporary bottom cover. Tools: 24500K-A401-A
° Set Regulated DC power supply at 2.8V.
° With Back cover opened, make sure that Shutter speed and f-stop LCD display indication in the viewfinder for Auto, Manual, 1/125 and B mode indicate properly.
° With Back cover closed, only Auto and Manual setting, LCD display indicates 1/1000 and the shutter should be released at the speed of 1/1000 until Film counter reches "0".
° With Exposure factor is being set, EF LCD in the viewfinder flickers at only Auto and Manual setting.
° With the shutter in the cocked position, Wind cocking indicator of the external LCD should be turned ON.
° With the shutter in the uncocked position, Wind cocking indicator of the external LCD should be turned OFF.

31. Confirmation: Flash leady ⚡ mark and Quench signal

Flash ready lamp signal indication

Tools: RLC-MV (Ready Lamp Checking Adapter)

° Apply 2.4V to RLC-MV, Flash ready ⚡ mark LCD in the viewfinder must turn ON.

Quench signal

° Approx. 2V of the output voltage will be measured when the shutter is released at Shutter dial setting B.

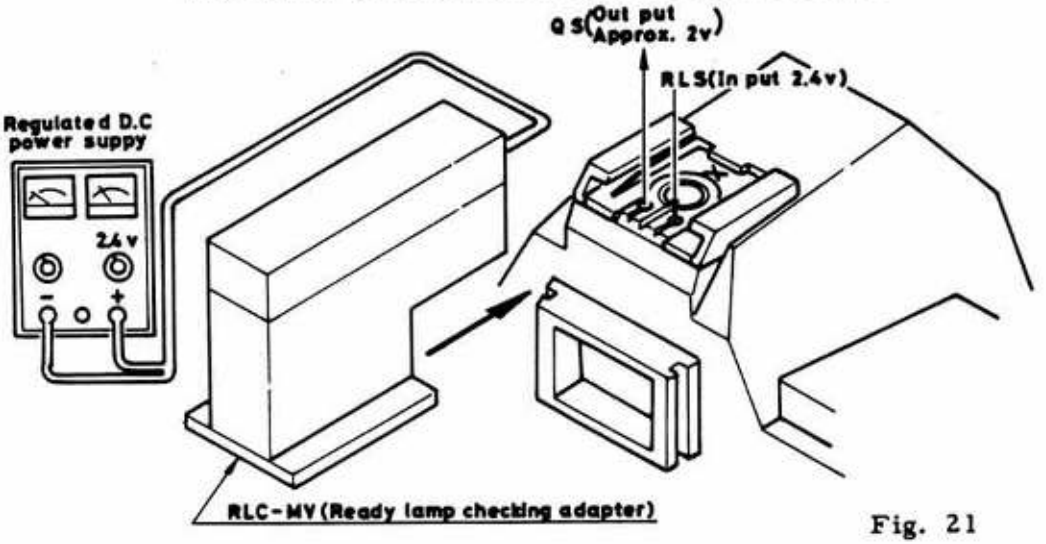


Fig. 21

32. Exposure value calibration

Aperture -priority AE mode

° EV 12
° ASA / ISO 100
° Diaphragm Setting Ring K (KA-00-1A)
° Shutter dial at AUTO
Standard shutter speed 15.6ms (14.6 ~ 17.6ms)

Adjustment:

Shutter speed should be calibrated 15.6ms by adjusting resister as shown in Fig. 22.

After adjusting EV12, check EV16 and EV8.

EV16	0.72 ~ 1.4ms
EV8	179 ~ 354ms

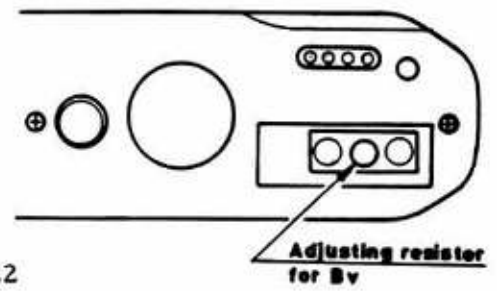


Fig. 22

Note:

This adjustment is actually adjusting an error of BV value, however, BV value can not be read directly. By checking TV value, BV value will be adjusted correctly.
Threfore, adjust T-adjustment and the resistance value of f-VR (6 KΩ ±10Ω) before adjusting BV value.
If BV value is adjusted without adjusting an error of f-VR and T-adjustment, Shutter priority AE mode and Programmed AE mode can not be controled correctly.

EV=BV + SV = AV + TV

Manual shutter mode

Check each shutter speed respectively.

Shutter-priority AE mode

Testers: 7PE-25A3 (Shutter tester)
ML-245 (Master Lens for 245)

Confirmation:

ASA/ISO
Set Master Lens for 245 to "A".
At first, set Shutter speed to 1/60, check the exposure value at EV16.

EV12, 1/60 (F8) ----- ±1.0EV

EV8 1/60 (F2) ----- ±1.0EV

EV16 1/250 (F16) --- ±1.0EV

If these EVs are out of allowance, readjust Level adjustment for Aperture control voltage.

Programmed AE mode

Testers: 7PE25A3 (Shutter tester)
ML-245 (Master Lens for 245)

ASA/ISO 100
Set Shutter dial to AUTO.
Set ML-245 to "A".

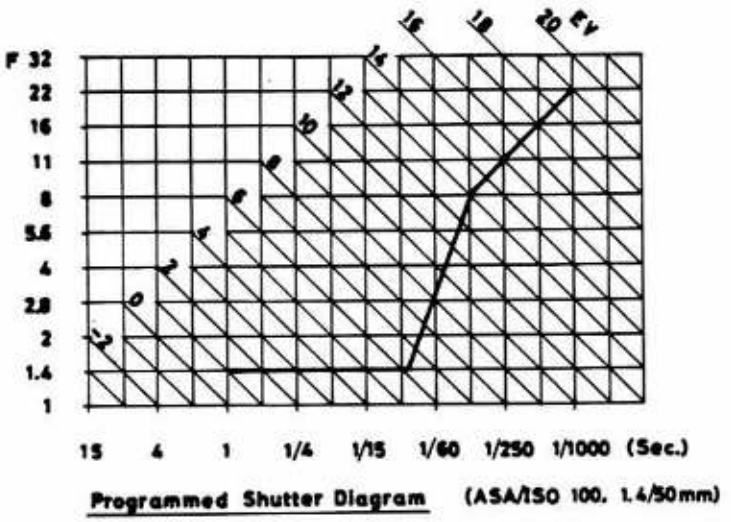


Fig. 23

Confirmation:

Check the exposure values at EV16, EV12, EV10, EV8 and EV6 respectively. The allowance limit of each exposure value is ±1.0EV.

33. Confirmation: Diaphragm-shutter synch. time

Testers: 7F-9A2 (Shutter tester)
DSST-240 (Diaphragm-Shutter Synch. Time for 240)

Set Shutter dial to 1/125 and mount DSST-240 on the camera.

Diaphragm-shutter synch. time standard -----50 - 80ms

34. Adjustment: ASL (Auto Speed Light) adjustment

Testers: ST-245 (Storobo tester)
ML-245 (Master lens for 245)

Mount Master lens (ML-245) with f-5.6 setting and install Back cover for Storobo tester to the camera.
Set Shutter dial to Auto and set ASA/ISO ring to 100.
Set Mode selector lever of Flash unit (AF280T) to TTL AUTO and connect 4P Synch. cord B to the camera.

Set the camera equiped with Flash unit AF280T to Storobo Tester (ST-245) as shown in Fig. 24.
Set the range of Flash meter to "2.8 - 11".
Press the reset button. Release the shutter.
The needle of Flash meter must point to F8 ± 0.25EV.

Adjustment: Turn Adjusting screw for ASL so that the needle of Flash meter points to 8 as shown in Fig. 25.

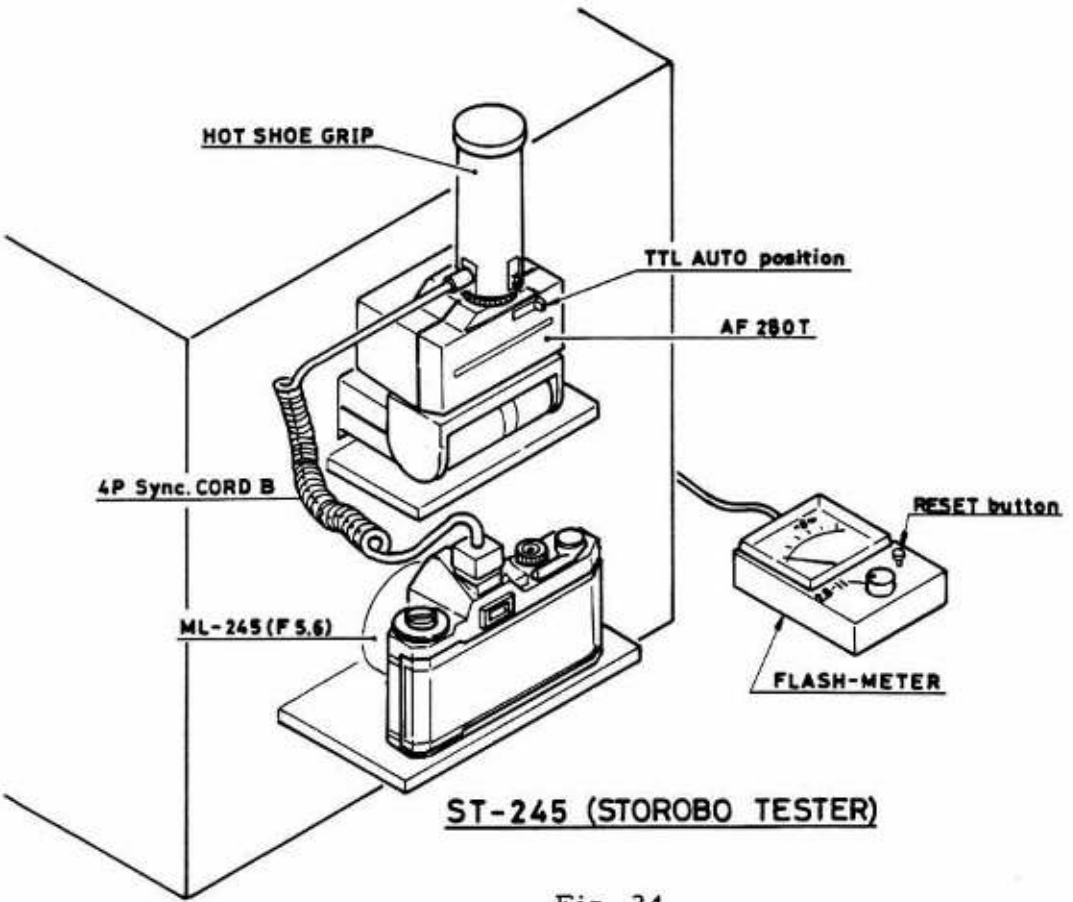


Fig. 24

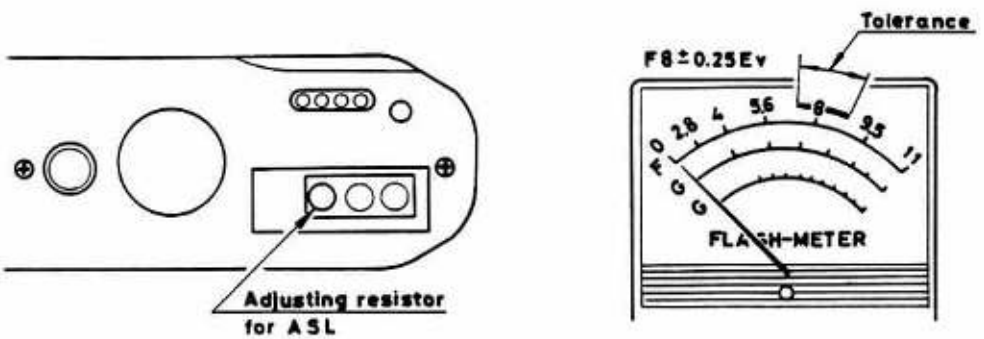


Fig. 25

51

35. Bottom cover assy.

• C117	R button
• 0-A401	Bottom cover assy.
• CSS1.7x3 x3	

36. Body covering

• A19	Body covering, left
• A20	Body covering, right

37. Winding lever cover

• C139	Winding lever cover Adhesive: Cemedine 575

1. Mirror flip-up governor assy.

- CNS1.7x1.6 x2
- B400 Mirror flip-up governor assy.
- W2 for Adj.

2. Unsoldering twenty-seven lead wires.

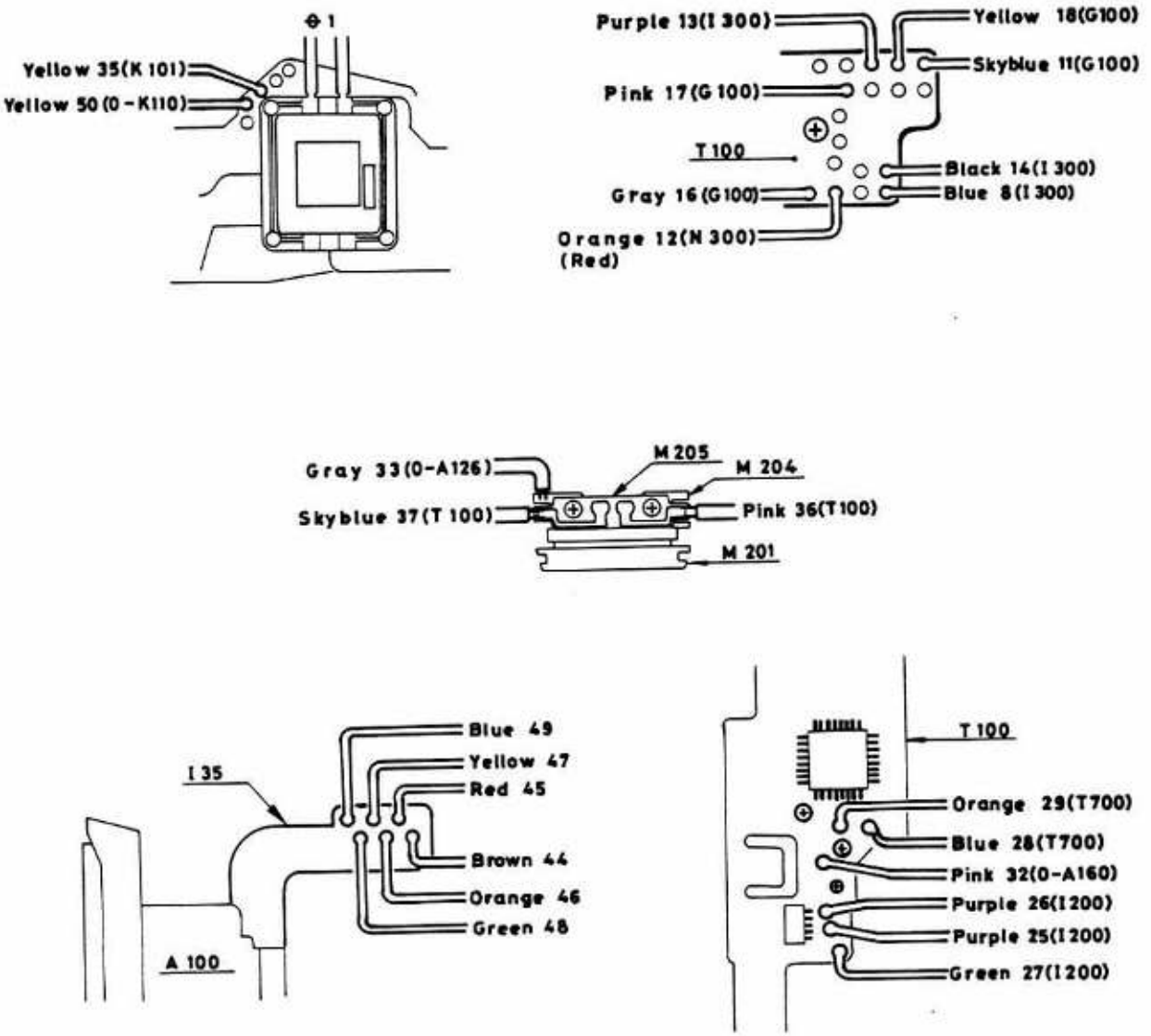


Fig. 26

3. P. C. board assy.

- T-CNL-E1.7x3.5 x2
- M205 Shoe board
- M204 Shoe contact piece C
- CNL-D1.4x2 Located under Shutter dial block (F100) on Supporter plate, right (B4).
- CNL-D1.7x4.5 x2
  Located the side of Mirror housing assy. where Cell frame (C1) is installed.
- CNS1.4x1.6 x2
  Located on LCD installation plate (0-M31). Inside of Mirror housing where LCD is installed.

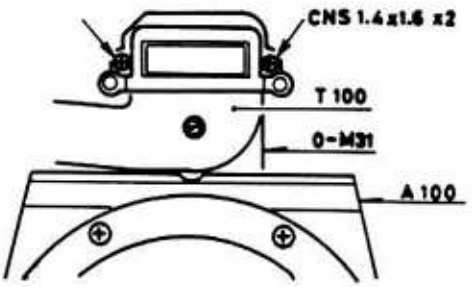


Fig. 27

- T100 / T1 P. C. board assy. / Cellframe

4. Self-timer SW and Piezo-electric buzzer

- CNS1.7x5
- I305 Cord holder
- I300 Self-timer SW
- CNS1.7x3
- A118 Buzzer lug plate
- A3 Back cover key collar
- N300 Piezo-electric buzzer

5. Mirror housing compleate assy.

- CNM2x3 x2
- CNM1.7x3 x2 Rise the mirror seat to remove the screw.
- 0-B000 Mirror housing compleate assy.

6. LCD installing plate assy.

- CNL-D1.7x2.5 x2
- 0-M31 LCD installing plate assy.

7. Eyepiece frame

- CNL-D1.7x4 x2
- M201 Eyepiece frame

8. Prism seat

- CNS1.7x3.5 x2
- M2 Prism seat

9. Release magnet / Rlease magnet P. C. board assy.

- CNS1.4x2 x2
- S100 Release magnet
- CNS1.7x1.6 x2
- T700 Release magnet P. C. board assy.

1. Confirmation: Diaphragm control block checking

Apply 2V to Pink lead wire (+) and Gray lead wire (–) from the electromagnet of Diaphragm control block.

The armature must be repeled from the magnet core when supplying the voltage to the electromagnet.

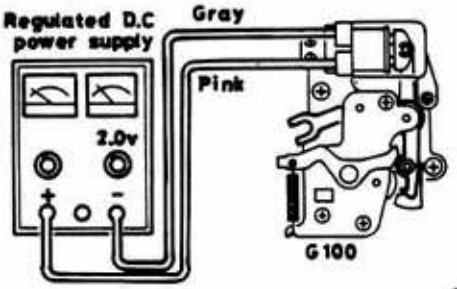


Fig. 28

2. Self-timer switch

° I 300	Self-timer switch
° I 305	Cord holder
° CNS1.7x5	

Confirmation:
Make sure that Self-timer switch turns ON / OFF properly.

3. Adjustment: f-VR resistance value adjustment

Tools: Diaphragm Setting Ring K (KA-00-1A)

Mount Diaphragm Setting Ring K on Front board assy, adjust the resistance value of f-volume / f-volume compensation VR assy. K101 / 0-K110 to be 6 kΩ ±10Ω by turning the adjusting resister of 0-K110.

* Turn Diaphragm Setting Ring K clockwise direction to eliminate the play which causes the reading errors.

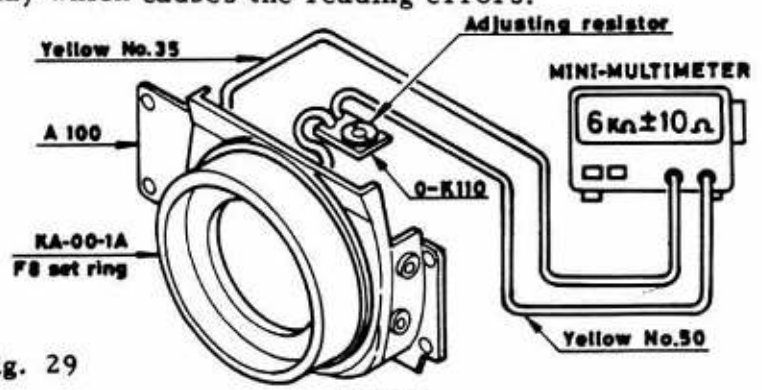


Fig. 29

4. LCD installation plate assy.

- 0-M31 LCD installation assy.
- CNL-D1.7x2.5 x2

5. Adjustment: Shock absorber rubber adjustment

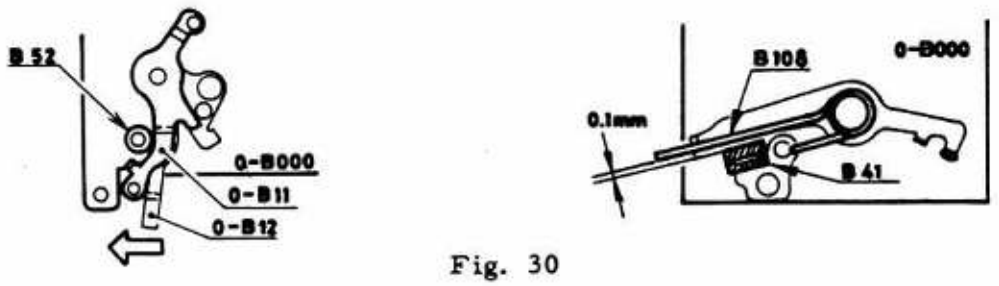
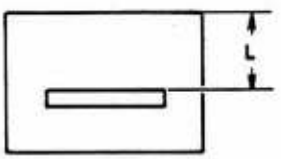


Fig. 30

Set Mirror actuator lever assy. (0-B11) against Shock absorber collar (B52).
Make sure that the clearance between Mirror flip-up spring and Shock absorber rubber(B41) is remained 0.1mm.

Adjustment can be made by replacing Shock absorber rubber(B41).



B41	L
00A	2.0 mm
00B	2.2 mm
00C	2.4 mm

Fig. 31

6. Adjustment: Release magnet installing position

- T700 Release magnet P. C. board assy.
- CNS1.7x1.6 x2
- S100 Release magnet
- I 211 MD & TL distributing wire holder
- CNS1.4x2 x2

* Install Release magnet (S100) so that the clearance between Hook lever (B7) and the lever of Release magnet becomes 0.2 ~ 0.3mm as shown in Fig. 32.

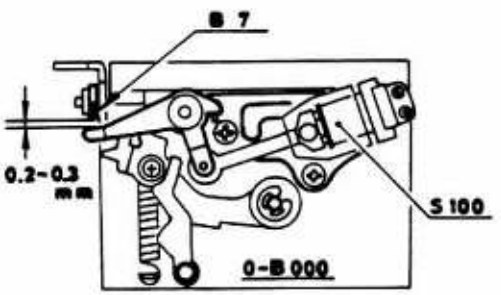


Fig. 32

7. MD and TL switch position adjustment

- With the mirror housing is in the charged condition

  Allowable clearance between MD switch contact piece and MD & TL switch lever assy (0-B34) is approx. 0.3~0.5mm, but adjust the clearance closer to 0.3mm to obtain the best adjustment.

  Make sure that the clearance of TL switch between Moving contact piece and the insulation tube of 0-B34 is remained 2mm.
  Check the continuity between Moving contact piece and Fixed contact piece. Refer to Fig. 33 left.

- With Mirror seat is fliped-up position

  Check the continuity between MD switch contact pice and MD &TL switch lever assy. (0-B34). Refer to Fig. 33 right.
  Adjust Moving contact piece and Fixed contact piece of TL switch so that the clearance becomes 0.2mm.

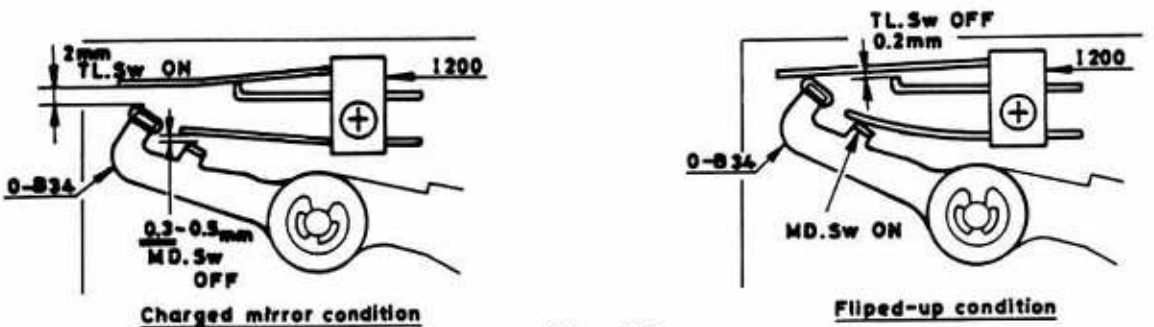


Fig. 33

8. Prism seat and Eyepiece frame

- M2 Prism seat
- CNS1.7x3.5 x2
- M201 Eyepice frame
- CNL-D1.7x4 x2

9. Front board assy. and Mirror housing assy.

- A100 Front board assy.
- 0-B000 Mirror housing assy.
- CNM2x3 x2
- CNM1.7x3 x2

38

* When installing Mirror housing assy. to Front board assy., be careful with the couplings as mentioned below.

° Stop down lever assy. (0-B241) and Coupling lever assy. (0-A174)
° Shutter plate assy. (0-B245) and Diaphragm control block (G100)
° Restitution link A assy. (0-B16) and Diaphragm control block

10. Adjustment: Parallax

Vertiacl direction 1° 50'

Holizontal direction 1°

11. Piezo-electric buzzer

° N300 Piezo-electric buzzer
° A3 Back cover key collar
° A118 Buzzer lug plate
° CNS1.7x3
* Insert Piezo-electric buzzer (N300) while pushing it toward the 2 o'clock position.
* Be careful with the soldering position of the lead wire of Piezo-electric buzzer because Red lead wire had been used in the initial productions.

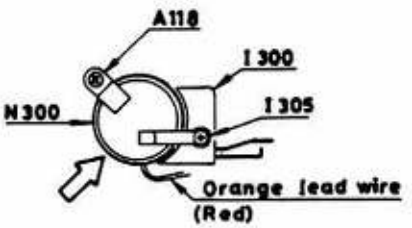


Fig. 34

12. P. C. board assy.

° Glue Cell frame / Photosensor (T1/T2) to P. C. board (T100). Use Pliobond. Do not ooze out Pliobond on the photosensor part.
° Fasten the screws (CNL-D1.7x4.5 x2) for installing T1 and T100 to Mirror housing.
° Fasten the screws (CNS1.4x1.6 x2) for fixing the inner LCD to LCD installing plate assy (0-M31) without making scratches on Small mirror A (L6).
° Fasten the screw (CNL-D1.4x2) for installing P. C. board (T100) to B4. (Fasten the screw firmly because it is grounded.)
° M204 Shoe contact piece C
° M205 Shoe board

39

° T-CNL-E1.7x3.5 x2

Note:
Do not touch the photosensor part with bear fingers and carefully handle each flexible part and the lead wires of P. C. board assy.

13. Adjustment: LCD positioning adjustment

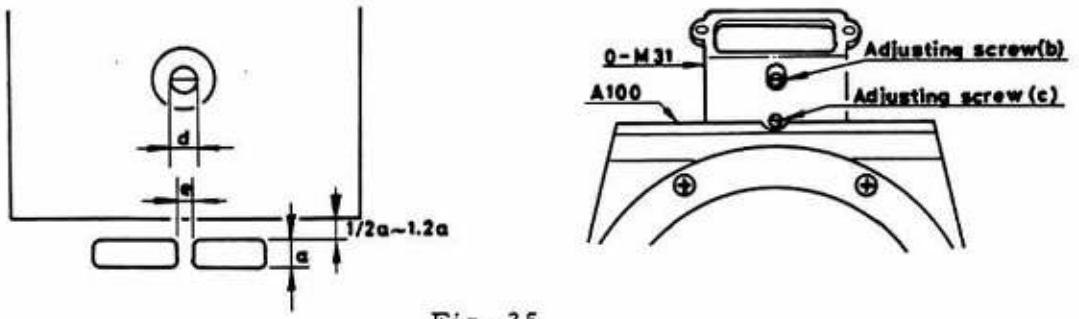


Fig. 35

While observing the LCD position in Viewfinder, make the adjustment as follows:

LCD window in Viewfinder should be positioned in parallel with the bottom side of Viewfinder.

Adjustment can be made by turning Adjusting screw (b).

LCD window should be positioned 1/2 - 1.2 times of the width of (a) as indicated in Fig. 35 away from the viewfinder frame.

Adjustment can be made by turning Adjusting screw (c).

Make sure that the space as indicated (e) should be positioned in the range as indicated (d) of Sprit-image line..

14. Mirror flip-up governor

° B400 Mirror flip-up governor
° W2 for Adj.
° CNS1.7x1.6 x2

* After installing B400, rise Mirror seat with a finger, then move a finger away from it. It should return to its original position by itself.

15. Soldering twenty-seven lead wires.

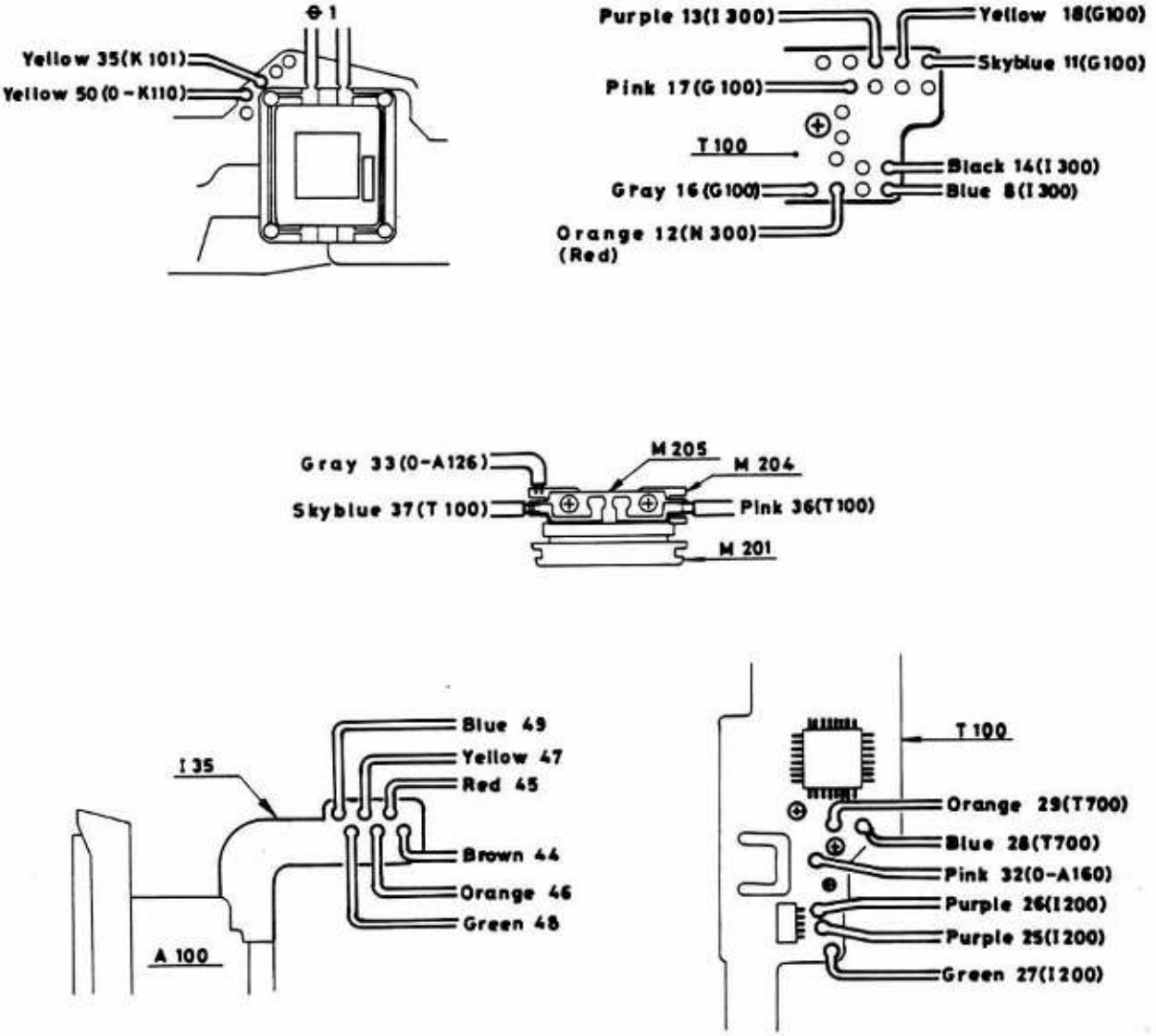


Fig. 36

61

16. Confirmation: Check the functions of Mirror housing as follows:

° Solder a lead wire and supply 2.8V as shown in Fig. 37.

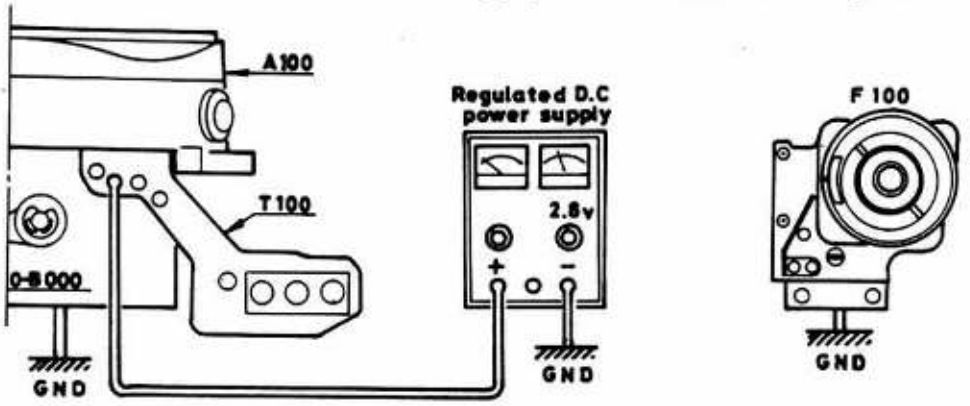


Fig. 37

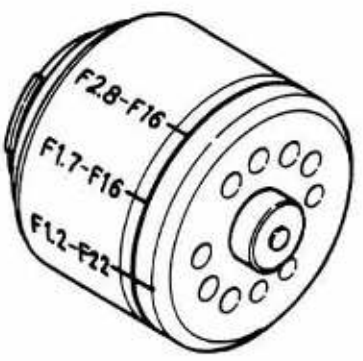
° Set Shutter dial any positions except "L".
Cock Mirror housing and depress Shutter release button.
At this time, Mirror seat must flip-up.
Set Mirror seat in the original position by depressing Restitution link A assy. (0-B16).

° Cock Mirror housing again.
Pull out Self-timer lever and depress Shutter release button.
LED must flicker with beeping sound and then Mirror seat flip-up.

° Lamp (⊖1) in the viewfinder must light on when depressing Lighting switch button assy. (0-A160).

17. Confirmation: Mount connector pin checking

Tools: CIJ-245 (Contact pin Inspection Jig for 245)



CIJ-245

Fig. 38

02

- Connect the lead wires and supply 2.8V in the same manner as Fig. 37.
- Mount CIJ-245 on the camera.
- Set Shutter dial to "M".

1. Set Contact pin Inspection Jig for 24500 to F1.2-F22.

1-1 The camera mounted with CIJ-245, decrease the manual shutter speeds by connecting the bottom contact column and GND of F block with a tweezers. Then face the camera toward a brighter subject. F22 of LCD in the viewfinder must flicker.

1-2 The camera mounted with CIJ-245, increase the manual shutter speeds by connecting the top contact column and GND of F block with a tweezers. Then face the camera toward a darker subject. F1.2 of LCD in the viewfinder must flicker.

Note: If other F number LCDs flicker, check brocken lead wires and poor connections of the contact pins.

2. Set CIJ-245 to F2.8-F16.

Check if F16 and F2.8 of LCDs in the viewfinder flicker in the same manner as 1-1 and 1-2.

Note: If other F number LCDs flicker, check a short circuit between the contact pins or the lead wires and GND, except A/M contact pins.

3. Set CIJ-245 to F1.7-F16.

Check if F16 and F1.7 of LCDs in the viewfinder flicker in the same manner as 1-1 and 1-2.

Note: If other F number LCDs flicker, check wrong wirings between Connector board (I35) and P. C. board (T100).

*. Breaf explanation about Contact pin Inspection Jig for 24500 (CIJ-245).

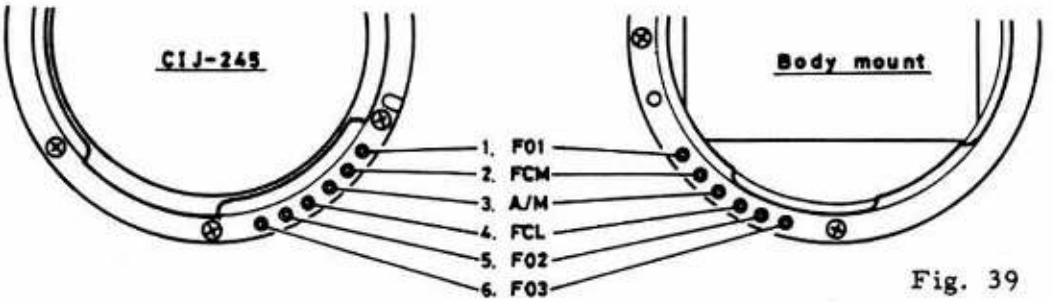


Fig. 39

Contact pin F01, F02 and F03

They receive the maximum f-stop which is converted to the electric signals from a lens.

Contact pin FCL and FCM

They receive the minimum f-stop which is converted to the electric signals from a lens.

Contact pin A/M

It receives the auto manual switching signals from a lens.

CIJ-245 transmits the informations as shown in Fig. 40 to the body mount whether the information is correct or incorrect.

CIJ-245 \ Contact pin	F 01	FCM	A/M	FCL	F 02	F03
F 1.2 – F 22	0	0	0	0	0	0
F 1.7 – F 16	0	1	0	1	0	1
F 2.8 – F 16	1	1	0	1	1	1

0 = ON
1 = OFF

Fig. 40

* 1 indicates No continuity between Contact pin and GND.
* 0 indicates Continuity between Contact pin and GND.

18. LCD display checking in each mode.

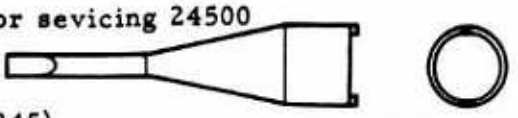
Mount Master Lens for 24500 (ML-245) or A lens on the camera. Check if LCD display indicates proper F numbers and shutter speeds in accordance with each mode setting.

Battery Checker checking 2.6V turns ON.
2.4V alternately flickers exposure designations and '000' sign.

64

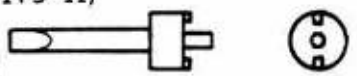
LIST OF SERVICING TESTERS, JIGS AND TOOLS FOR 24500

* Exclusively used Testers, Jigs and Tools for sevicing 24500

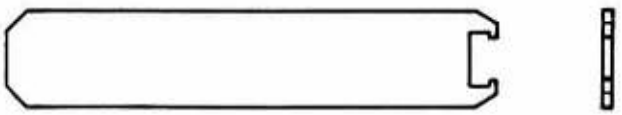


24500K-C92-A

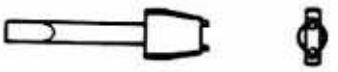
Strobo Tester (ST-245)
Contact pin Inspection Jig for 24500 (CIJ-245)
Master Lens for 24500 (ML-245)
Grip Mount Socket Driver Bit (24500K-A45-A)
Preview Lever Seat Driver Bit (24500K-A171-A)
Preview Lever Retainer Screw Driver Bit (24500-A173-A)
Slide Seat Nut B Driver Bit (24500K-B10-A)
Top Cover Retainer Nut Driver Bit (24500K-C92-A)
Lighting Switch Button Nut Spanner (24500K-A160-A)
Bottom Cover Tool (24500K-A401-A)



24500K-A45-A

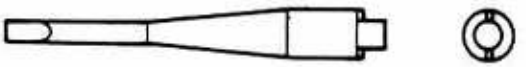


24500K-A160-A



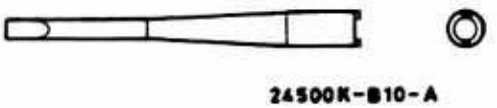
24500K-A173-A

* Other Testers Tools and Jigs

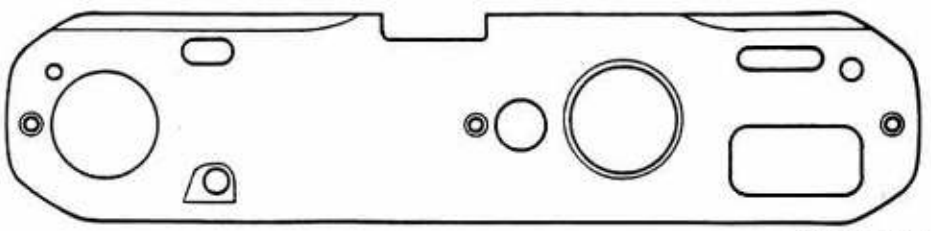


24500K-A171-A

Shutter Tester (7F-9A2) or (7PE-25A3)
T-Adjuster (0C-2) or (TA-07/11-01)
T-Adjuster Connection Adapter for LX (TA-240)
Dial Gauge Comparator (PH-2)
45.46mm Block Gauge (229N-A01-A2)
Mount Block (23600N-A01, A104-A)
1000mm Collimator
Regurated DC Power Supply
Circuit Tester
Oscilloscope
Ready Lamp Checking Adapter (RLC-MV)
Digital Multi Meter TR-6355 or TR-6354
Diaphragm Setting Ring K (KA-00-1A)
Wind Lever Nut Spanner (23600K-C134-A-2)
Rewind Shaft Receptacle Nut Spanner (23600K-D4-A-2)
Nut Driver Bit (23903K-A346-A)
Diaphragm-Shutter Synch. Time Checking Adapter (DSST-240)



24500K-B10-A



24500K-A401-A